MITSUBISHI

THE BIG SCREEN COMPANY™

Digital
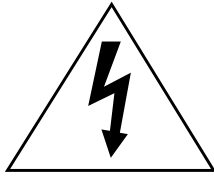

Projection Television Models

WS-B55   WS-48511 WS-55511   WS-55711
WS-65511 WS-65611 WS-65711   WS-65712
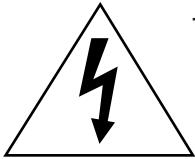WS-73711

Owner's Guide

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Warning: To avoid permanently imprinting a fixed image onto your TV screen, please do not display the same stationary images on the screen for more than 15% of your total TV viewing in one week. Examples of stationary images are letterbox top/bottom bars from DVD disc or other video sources, side bars when showing standard TV pictures on widescreen TVs, stock market reports, video game patterns, black or bright Closed Caption backgrounds, station logos, web sites or stationary computer images. Such patterns can unevenly age the picture tubes causing permanent damage to the TV. Please see pages 25 and 70 for a detailed explanation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and the receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

CAUTION: To assure continued FCC compliance, the user must use a shielded video interface cable with bounded ferrite cores, when using the VGA input.

Changes or modifications not expressly approved by Mitsubishi could void the user's authority to operate this equipment.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

NOTE TO CATV SYSTEM INSTALLER: THIS REMINDER IS PROVIDED TO CALL THE CATV SYSTEM INSTALLER'S ATTENTION TO ARTICLE 820-40 OF THE NEC THAT PROVIDES GUIDELINES FOR THE PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSE TO THE POINT OF CABLE ENTRY AS PRACTICAL.

In This Owner's Guide

IMPORTANT SAFEGUARDS

**Please read the following safeguards for your TV and retain for future reference.
Always follow all warnings and instructions marked on the television.**

1. **Read, Retain and Follow All Instructions**
   Read all safety and operating instructions before operating the TV. Retain the safety and operating instructions for future reference. Follow all operating and use instructions.

2. **Heed Warnings**
   Adhere to all warnings on the appliance and in the operating instructions.

3. **Cleaning**
   Unplug the TV from the wall outlet before cleaning. Do not use liquid, abrasive, or aerosol cleaners. Cleaners can permanently damage the cabinet and screen. Use a lightly dampened cloth for cleaning.

4. **Attachments and Equipment**
   Never add any attachments and/or equipment without approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

5. **Water and Moisture**
   Do not use the TV where contact with or immersion in water is possible. Do not use near bath tubs, wash bowls, kitchen sinks, laundry tubs, swimming pools, etc.

6. **Accessories**

   Do not place the TV on an unstable cart, stand, tripod, or table. The TV may fall, causing serious injury to a child or adult and serious damage to the TV. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the TV. Any mounting of the TV should follow the manufacturer's instructions, and should use mounting accessories recommended by the manufacturer.

   An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. **Ventilation**
   Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the TV and to protect it from overheating. Do not block these openings or allow them to be obstructed by placing the TV on a bed, sofa, rug, or other similar surface. Nor should it be placed over a radiator or heat register. If the TV is to be placed in a rack or bookcase, ensure that there is adequate ventilation and that the manufacturer's instructions have been adhered to.

8. **Power Source**
   This TV should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.

9. **Grounding or Polarization**
   This TV is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

10. **Power-Cord Protection**
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the TV.

11. **Lightning**
    For added protection for this TV during a lightning storm, or when it is left unattended and unused for long period of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the TV due to lightning and power-line surges.

IMPORTANT SAFEGUARDS, cont'd.

12. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

13. Overloading

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
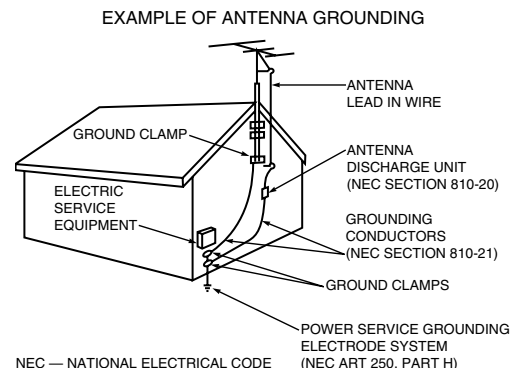
14. Object and Liquid Entry

Never push objects of any kind into this TV through openings as they may touch dangerous voltage points or short-out parts that could result in fire or electric shock. Never spill liquid of any kind on or into the TV.

15. Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the TV, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electric Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING

ANTENNA LEAD IN WIRE

GROUND CLAMP

ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)

ELECTRIC SERVICE EQUIPMENT

GROUNDING CONDUCTORS (NEC SECTION 810-21)

GROUND CLAMPS

POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250. PART H)

NEC — NATIONAL ELECTRICAL CODE

16. Servicing

Do not attempt to service this TV yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

17. Damage Requiring Service

Unplug the TV from the wall outlet and refer servicing to qualified service personnel under the following conditions:

(a) When the power-supply cord or plug is damaged.
(b) If liquid has been spilled, or objects have fallen into the TV.
(c) If the TV has been exposed to rain or water.
(d) If the TV does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV to its normal operation.
(e) If the TV has been dropped or the cabinet has been damaged.
(f) When the TV exhibits a distinct change in performance - this indicates a need for service.

18. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

19. Safety Check

Upon completion of any service or repair to the TV, ask the service technician to perform safety checks to determine that the TV is in safe operating condition.

20. Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

If you have questions regarding your television, call

Consumer Relations

at (800) 332-2119, or email us at
MDEAservice@bigscreen.mea.com

To order replacement or additional remote controls or owner's guides

call (800) 553-7278

or

visit our website at **www.mitsubishi-tv.com**

In This Section . . .

1

CHAPTER ONE

Our Thanks...

Thank you for choosing Mitsubishi as your premier Home Entertainment provider.

This Owner's Guide describes the features and functions of your Mitsubishi widescreen, high definition TV. We urge you to examine this Owner's Guide to become familiar with the innovative features and operations this unique television offers.

The very core of our corporate philosophy is to provide our customers with the very best. Our development team at Mitsubishi has worked to provide you with a television that defines "state-of-the-art," with the capability to meet your needs now and in the future.

Whether this is your first Mitsubishi electronic product, or an addition to your Mitsubishi collection, we believe you and your family will continue to enjoy your Mitsubishi home theater for many years.

Thank you,

Mitsubishi Digital Electronics America, Inc.

Unpacking Your New TV

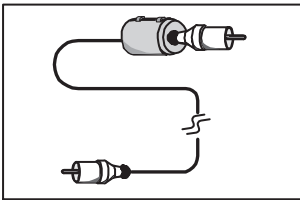Please take a moment to review the following list of items to ensure that you have received everything included:

1. Remote Control
2. (2) AA Batteries
3. (1) Digital Audio Cable
4. (1) Double IR Emitter Cable
5. (1) Quadruple IR Emitter Cable
6. Product Registration Card
7. Owner's Guide
8. Quick Reference Card
9. NetCommand™ 2.0 Guide

1. *Remote Control*
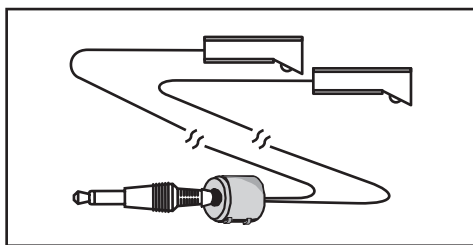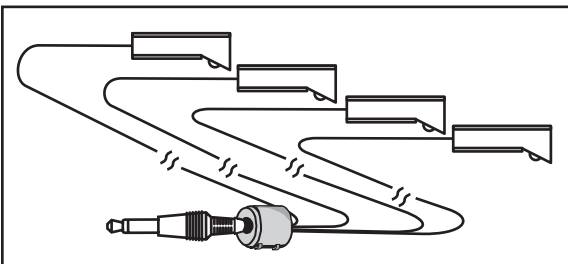

2. *(Two) AA Batteries*

3. *(One) Digital Audio Cable*

4. *(One) Double IR Emitter Cable*

5. *(One) Quadruple IR Emitter Cable*

Special Features

Your new High Definition bigscreen television has many special features that make it the perfect center of your home entertainment system. Below we have highlighted a handful.

Fully Integrated HDTV

Your Mitsubishi bigscreen TV can receive all approved terrestrial broadcast digital signals, non-scrambled digital cable signals, terrestrial analog signals and non-scrambled analog cable signals that use a standard offset carrier system. Further, your TV will display all High Definition signals as 1080i True HDTV™ and all standard definition signals will be displayed as 480p.

NetCommand™ Home Network Control System

Your Mitsubishi bigscreen HDTV offers a new level of networking to combine selected older products with new and future digital products. NetCommand™ supports IEEE 1394 connections, HAVi (Home Audio Video Interoperability) Control system, Audio Video Control system (AV/C), 5C copy protection and IR control of selected older products such as VCRs, DVD players, cable boxes or satellite receivers. All operating in a similar manner using on-screen graphical menus and a single remote control. See the NetCommand™ 2.0 Guide for instructions on how to use this feature.

Wide Screen Picture Format

Enjoy a full theatrical experience in the comfort of your home. View pictures as film directors intended them. Both DTV and DVD support the widescreen format well-suited for your new TV.

PIP/POP Viewing Option

Using Picture-in-Picture and Picture-outside-Picture will give you exciting options for viewing your favorite programs.

V-Chip Technology

Your Mitsubishi bigscreen will allow you to restrict viewing of programming by general content, category contents, or even by time.
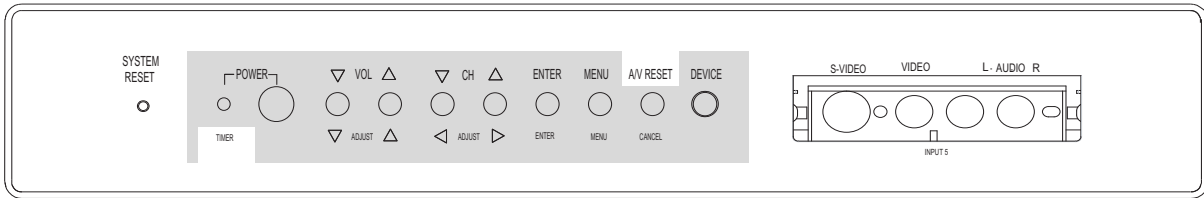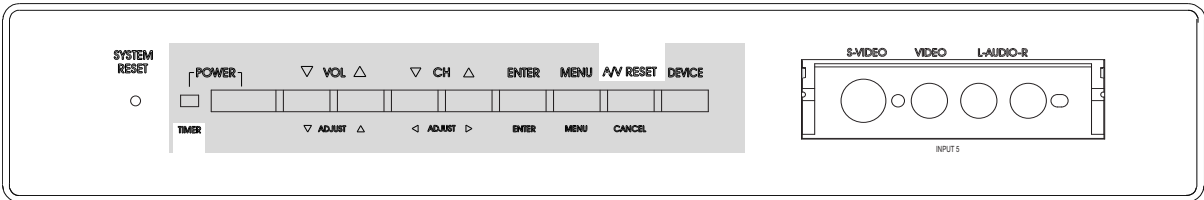
In This Section . . .

2

CHAPTER TWO

Front Control Panel

Front Panel WS-B55; WS-55511; WS-55711; WS-65511; WS-65611; WS-65711; WS-73711

Front Panel WS-48511
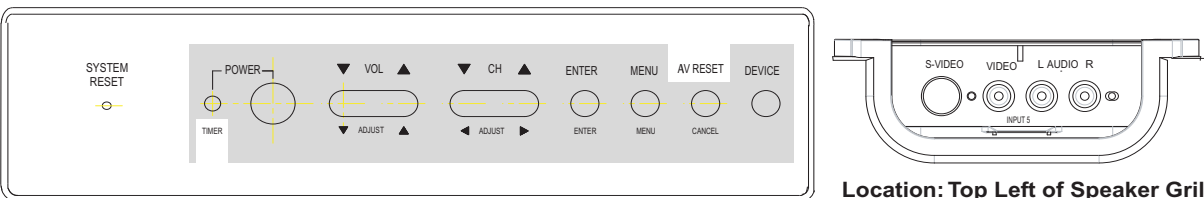
Front Panel WS-65712

Location: Top Left of Speaker Grill

The buttons on the Front Control Panel highlighted in gray are duplicated on the remote control. The top row of labels show the control functions when there are no TV menus displayed on the screen. The bottom row of labels show the control functions when the TV menus are displayed on the screen or when a special function has been activated. See **Remote Control Functions: Overview**, for further details on the functions of these buttons.

System Reset
If the TV will not respond to either the remote control or the front panel controls and will not power off, press the SYSTEM RESET button with a pointed item like the end point of a paperclip. The TV turns Off and the TIMER light flashes quickly for about one minute. When the TIMER light stops flashing, you may turn on the TV again. The changes you made while the TV was On before you used the SYSTEM RESET button may be cancelled, however, the changes you made previously are not cancelled.

Power/Timer
The green light is a multi-function indicator. Each time the TV is plugged into the wall electrical outlet, when power is restored after a power failure, or after using the SYSTEM RESET button, this light will flash rapidly for about one minute. Do not attempt to turn on the TV during this period. Wait for the flashing to stop before attempting to turn the TV on. While the TV is powered on, the light illuminates steadily. If the TV has been programmed to turn on automatically using the Timer feature, this light will flash slowly while the TV is powered off.

A/V Reset
Press this button to reset all A/V memories to the factory default settings.

Input 5
This input can be used for convenient connection of a camcorder or other video device to the TV. Please note that if you connect to the S-VIDEO terminal, the VIDEO terminal is deactivated. The VIDEO terminal is active when there is no S-Video connection.

Back Panel
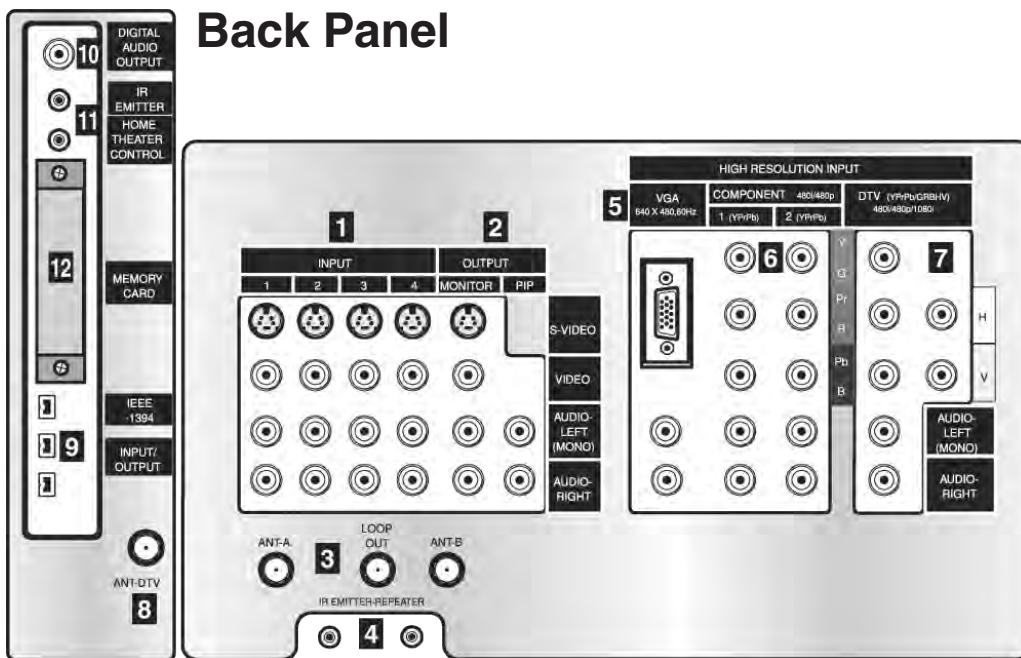
1 Inputs 1-4

These inputs can be used for the connection of a VCR, Super VHS (S-VHS) VCR, DVD player, standard satellite receiver or other A/V device to the TV. Please note that if you connect to the S-VIDEO terminal, the VIDEO terminal is deactivated. The VIDEO terminal is active when there is no S-Video connection.

2 Output (Monitor and PIP)

The Monitor Output sends the TV audio and video signals from Ant-A, Ant-B and Inputs 1-5 to an A/V Receiver or other analog A/V equipment. Monitor Output will also provide the signals, converted to analog signals, received from Ant-DTV and IEEE-1394 products. There will be no video signals from digital products if the original signals are copy protected.

From VGA, Component 1 and 2 and Input-DTV, no signals will be sent. The PIP output sends the PIP's or POP's audio signal to an amplifier or wireless headphones. If no PIP or POP is displayed, the PIP output will not send any audio.

3 Antenna (ANT-A, LOOP OUT, and ANT-B)

ANT-A and ANT-B receive analog NTSC signals from VHF/UHF antennas or an analog NTSC cable system. LOOP OUT sends the ANT-A signal out to another component, such as a cable box or VCR.

4 IR Emitter-Repeater

Connecting IR emitters here allows the TV to pass IR commands from most IR remote controls to other A/V devices that are out of range of the remote control.

5 VGA

This input can be used for the connection of a computer. Please see *Appendix B* for signal compatibility.

6 Component Inputs 1-2

These inputs can be used for the connection of A/V equipment with component video outputs, such as a DVD player. Please see *Appendix B* for signal compatibility.

7 DTV Input

This input is used to connect an external DTV receiver, and can be configured for HDTV signal types component (YPrPb), RGB sync on green, and RGB plus H&V. Please see *Appendix B* for signal compatibility.

Back Panel
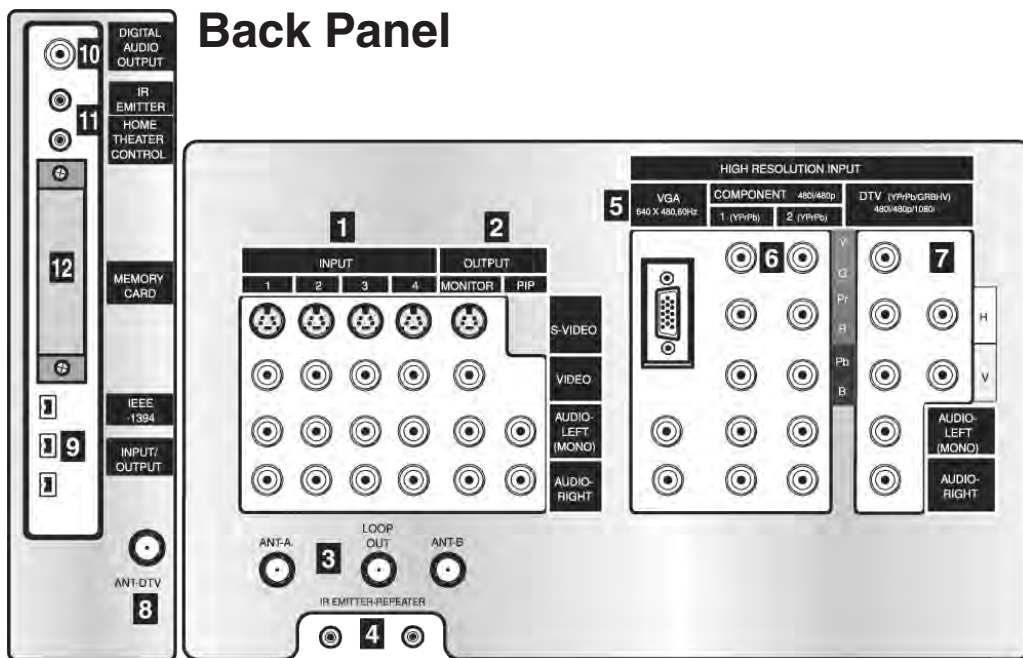
8 Antenna DTV (ANT-DTV)

This input receives digital TV signals from a VHF/UHF antenna or unscrambled digital cable system. If the TV receives scrambled cable signals on this input, it will not be able to decode them. In this case, your cable company must provide a decoding box.

9 IEEE-1394 Input/Output

These jacks allow the TV to connect to one or more external digital products by means of a single cable. Three jacks are provided for this purpose, which allow for a high degree of flexibility for connecting your system together. Please refer to the NetCommand™ Guide for IEEE-1394 device connection details.

10 Digital Audio Output

This output provides digital audio streams, such as Dolby Digital, PCM or MPEG digital audio, received in the signal from the ANT-DTV input or the IEEE-1394 devices. This output is intended to be connected to an external audio receiver that is capable of decoding the digital streams and converting them to analog signals suitable for driving loudspeakers. This output does not send a signal while analog devices connected to other inputs are being used.

11 IR Emitter-Home Theater Control Output

Two jacks are provided for connecting IR emitters. IR Emitters connected to these jacks are used by the NetCommand™ system of the TV to control external analog devices such as VCRs, DVDs, cable boxes satellite receivers and audio receivers.

12 Memory Card

The card slot behind the cover allows the software of the TV to be updated with expanded features by use of a compact flash card provided by Mitsubishi. The TV does not come with a card and does not require a card when it is first received. You should not attempt to use a flash card that is not authorized by Mitsubishi or insert any other item into this slot as this may cause damage to your TV that is not covered by your warranty. When software updates are available, they will be announced on our web site, www.mitsubishi-tv.com. If you return your Owner's Registration card with your model and serial number, you may receive written notification of available software updates.

Connecting External Devices & NetCommand™ Setup

NetCommand™ is able to control many current audio and video devices by sending remote control signals from the TV to each device. NetCommand™ will also automatically switch the TV and compatible Audio/Video (A/V) Receivers to the correct input used with each device. It is important that the inputs on the TV and AV Receiver match the NetCommand™ Setup.

To simplify the installation of NetCommand™, there is a step-by-step on-screen NetCommand™ Setup procedure. This procedure details the type and brands of devices you are connecting to the TV. The NetCommand™ Setup also assigns preset TV and AV Receiver inputs for each device. You should connect each device to the TV input (both audio and video) and to the AV Receiver (audio) as shown in Figure 1.
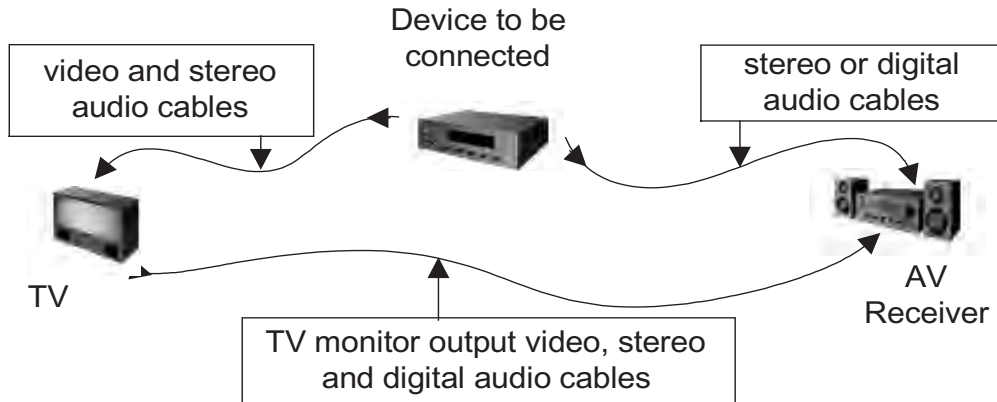

Figure 1. Connecting each Device

The following charts show which preset inputs you should use on the TV and AV Receiver. Chart 1 shows TV inputs. Chart 2 shows the AV Receiver inputs.

Device Audio and Video Outputs to TV Inputs	
Antenna/Cable (analog)	Ant-A
Antenna/Cable (digital)	Ant-DTV
Cable box	Ant-B
VCR	Input-1
Satellite Receiver (DBS)	Input-2
Camcorder	Input-5
DVD Player	Component-1

Chart 1. Device Audio/Video Outputs to TV Inputs

A/V Receiver Input by Manufacturer

	Mitsubishi 1	Mitsubishi 2	Bose	Denon	Integra	Kenwood	Marantz	Pioneer 1	Pioneer 2	Rotel	Sony	Yamaha 1	Yamaha 2
	Model	Model	Model	Model	Model	Model	Model	Model	Model	Model	Model	Model	Model
	M-VR800 & M-VR1000	M-VR900 & M-VR700	Lifestyle® 28	AVR-2700	DTR-9.1	VR-2080	SR8200	VSX-D557	VSX-49TX	RSX-1065	STR-DE825	RV-X2095	RX-V2200
Device Audio Output to AV Receiver Inputs by Name													
VCR	VCR 1	VCR	VCR	VCR-1	Video 1	Video 1	VCR1	VCR/Tape	VCR 1/DVR	Video 2	Video 1	VCR 1	VCR 1
Satellite Receiver	Aux	Cable/DBS	AUX	CD	Video 3	Video 3	DSS	CD	SAT	Video 4	TV/DBS	TV/DBS	D-TV/LD
DVD Player	DVD	DVD	(built-in)	DVDVDP	DVD	Video 4	DVD	LD/SAT	DVD/LD	Video 5	TAPE/MD	CD	DVD
TV Monitor Output (& Digital Audio)	TV	TV	TV	TV/DBS	Video 4	Video 4	TV	DVD/TV	TV	Video 1	DVD/LD	DVD/LD	CBL/SAT

Chart 2. AV Receiver Inputs

NetCommand™ Setup provides an edit option so you may delete a type of product you do not have, change the inputs you used for connecting each device or add devices not included in the presets above. See Editing NetCommand™ Setup later in this chapter. See Connection Helpful Hints, inside back cover, for additional information.

NetCommand™ Supported Devices

Following is a list of devices, by several manufacturers, tested and shown to be compatible with the NetCommand™ control system. When you use these devices you will be able to control them without changing the setting of the remote control from TV to another product.

NetCommand™ Compatible Legacy Devices

Brand	AV Receiver	Cable Box	DBS Satellite Receiver	DVD Player	VCR
Mitsubishi	M-VR800, M-VR900		SR-HD5	DD-6000, DD-8020	HS-U795,HS-U778
Bose	Lifestyle® 28			Lifestyle® 28	
Denon	AVR-2700				
Echostar			6000		
Funi					F260LA
General Instruments		CFT2200			
Hitachi				DV-P415U	VT-FX665A
Hughes			HIRDE-45, HIRDE-86		
Integra	DTR-9.1			DPS-9.1	
Jerrold		Different Models			
JVC				XV-S65GD	HR-VP 650U
Kenwood	VR2080				
Marantz	SR8200				
Microsoft				XBox™ *	
Motorola		Different Models			
Panasonic			TU-HDS20	DVD-A310	PV-8662
Philips					VR620CAT
Pioneer	VSX-D557, VSX-49TX			DV-414	
RCA			DRD480RE, DTC-100		
Rotel	RSX-1065				
Scientific Atalanta		8600			
Sharp					VC-H810U
Sony	STR-DE825		SAT-A55	DVP-S500D, PlayStation® 2**	SLV-778HF
Toshiba			DTS-300	SD-9200, SD-5109	W-717
Yamaha	RX-V2095, RX-V2200			DVD-S520, DVD-S996	
Zenith			DTV1080		

* XBox™ requires the DVD kit from Microsoft
** Playstation® 2 requires the DVD Remote Controller kit from Sony; DVD Player software disc version 2.10

NetCommand™ may be able to operate additional models since many manufacturers use the same control signals to operate some or all of the models they offer. The above chart lists only the models that have been tested with NetCommand™. For each Manufacturer, models other than specified above may be compatible.

For devices not supported by NetCommand™, you will need to use the original remote control of the device or program the TV remote to operate these devices in the traditional manner.

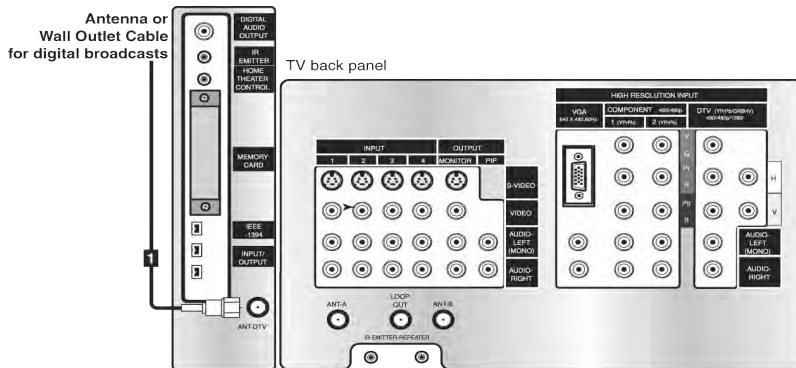# Connecting Antenna or Wall Outlet Cable for Digital Broadcasts

Figure 1. Antenna or wall outlet cable.

Antenna or Wall Outlet Cable for Digital Broadcasts
For cable or antenna with coaxial lead *(Figure 1)*

1. Connect the incoming cable to ANT-DTV on the TV back panel.

Mitsubishi strongly recommends against using antennas with twin flat leads. Twin flat lead antenna wires are subject to interference which may adversely affect the performance of the TV. We recommend using coaxial antenna cable.

<div style="border:1px solid black">

IMPORTANT

Additional connection cables are not provided with the TV. They are available at most electronic stores.

</div>

Connecting an Analog Antenna, Wall Outlet Cable, or Cable Box

Separate UHF and VHF Antennas
(Figure 2)

1. Connect the UHF and VHF antenna leads to the UHF/VHF combiner.

2. Push the combiner onto ANT-A on the TV back panel.

Note: UHF/VHF combiners are not provided with the TV. They should be available at most electronic stores.

Mitsubishi strongly recommends against using antennas with twin flat leads. Twin flat lead antenna wires are subject to interference which may adversely affect the performance of the TV. We recommend using coaxial antenna cable.

Figure 2. Connecting separate UHF and VHF antennas.

Connecting an Analog Antenna, Wall Outlet Cable, or Cable Box, cont'd.

Antenna or Wall Outlet Cable for Analog Broadcasts.
(Figure 2)

For antennas with twin flat lead

1. For antenna with twin flat leads, connect the 300-Ohm twin leads to the transformer.

2. Push the 75-Ohm side of the transformer onto ANT-A on the TV back panel.

Note: 300-Ohm to 75-Ohm matching transformers are not provided with the TV.   They should be available at most electronic stores.

For cable or antenna with coaxial lead

3. Connect the incoming cable to ANT-A on the TV back panel.
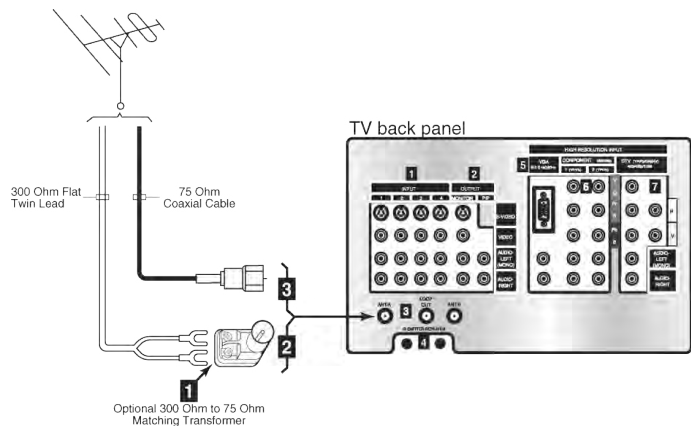
Figure 2. Connecting antenna or wall outlet cable for analog broadcasts.

Mitsubishi strongly recommends against using antennas with twin flat leads. Twin flat lead antenna wires are subject to interference which may adversely affect the performance of the TV. We recommend using coaxial antenna cable.
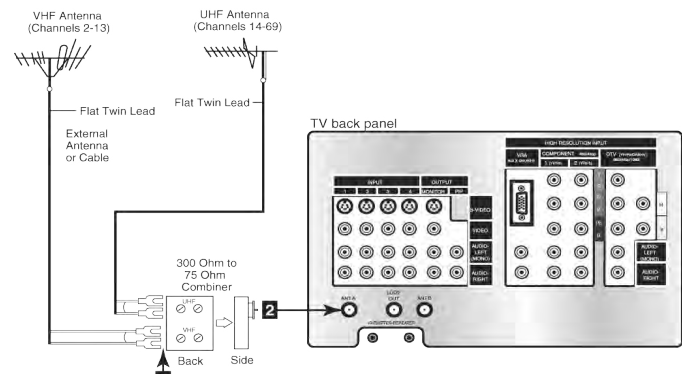
Cable Box
(Figure 3)

1. Connect the incoming cable to ANT-A on the TV back panel.

Note: Connect two coaxial cables as follows:

2. One from LOOP-OUT on the TV back panel to IN on the cable box back panel.

3. One from OUT on the cable box back panel to ANT-B on the TV back panel.

Figure 3. Connecting the cable box.

Connecting an Analog VCR

Figure 1. Connecting VCR with antennas or wall outlet cable.

IMPORTANT

Additional connection cables are not provided with the TV. They are available at most electronic stores.

Figure 2. Connecting VCR with cable box.

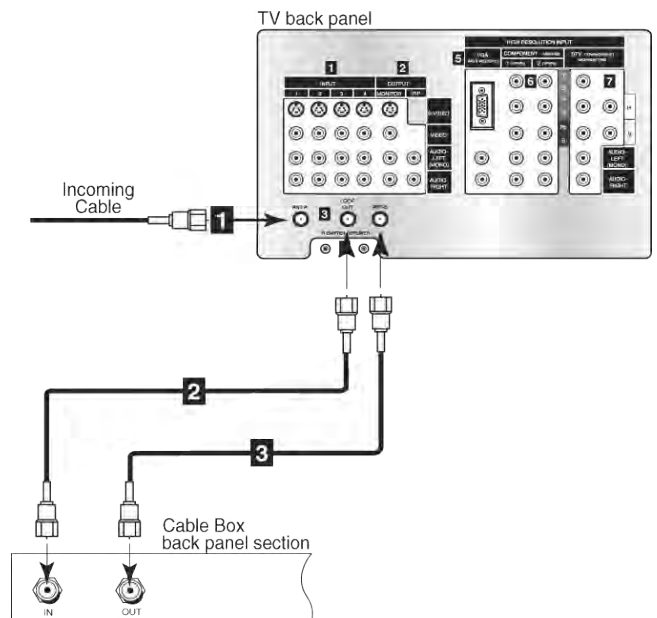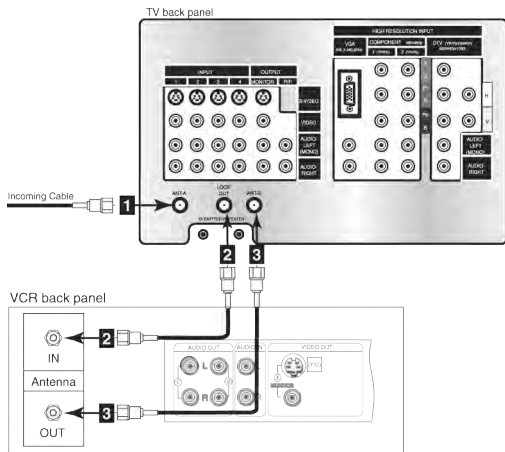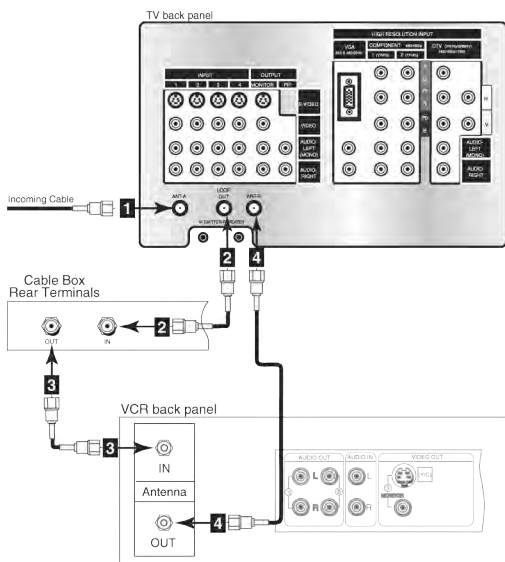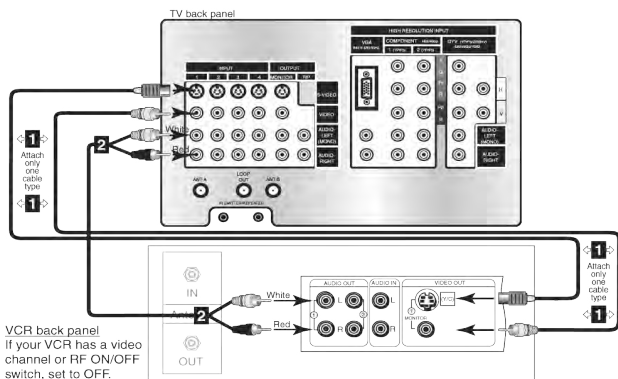*Figure 3. Connecting the VCR Audio/Video.*

VCR to Analog Antennas or Wall Outlet Cable *(Figure 1)*

1. Connect the incoming cable to ANT-A on the TV back panel.

Note: Connect two coaxial cables as follows:

2. One from LOOP-OUT on the TV back panel to ANTENNA IN on the VCR back panel.

3. One from VCR back panel ANTENNA OUT to ANT-B on the TV back panel.

4. Now complete Figure 3, steps 1-2.

VCR to Cable Box *(Figure 2)*

1. Connect the incoming cable to ANT-A on the TV back panel.

Note: Connect three coaxial cables as follows:

2. One from LOOP-OUT on the TV back panel to IN on the back of the cable box.

3. One from OUT on the back of the cable box to ANTENNA IN on the VCR back panel.

4. One from ANTENNA OUT on the VCR back panel to ANT-B on the TV back panel.

5. Now complete Figure 3, steps 1-2.

Adding Composite Video or an S-Video with Audio Connections
(Figure 3)

1. Connect a video cable from VIDEO OUT on the VCR back panel to VIDEO INPUT 1 on the TV back panel.

Note: If you have an S-VHS VCR, follow the same steps using the S-Video terminals on the VCR and TV (in place of the composite terminals).

2. Connect a set of audio cables from AUDIO OUT on the VCR back panel to AUDIO INPUT 1 on the TV back panel. The red cable connects to the R (right) channel and the white cable connects to the L (left) channel. If your VCR is mono (non-stereo), connect only the white (left) cable.

Note: Step 2 allows the use of the TV speakers with the VCR.

Important: If you add a second VCR or use any other inputs for your VCR, see the section on Editing NetCommand™ Setup to ensure this change matches the NetCommand™ system.

Connecting an Audio/Video Surround Sound Receiver

Connecting an A/V Receiver
(Figure 1)

1. Connect a video cable from Monitor VIDEO OUTPUT on the back of the TV to the TV VIDEO INPUT on the back of the A/V Receiver.

Note: If you have connected an S-VHS VCR to the A/V Receiver, then follow the same video connection using the S-Video cable and terminals on the TV and A/V Receiver (instead of the VIDEO cable).

2. Connect a set of audio cables from the Monitor AUDIO OUTPUT on the back of the TV to the TV AUDIO INPUT on the back of the A/V Receiver. The red cable connects to the R (right) channel and the white cable connects to the L (left) channel.

When you connect a digital A/V Receiver with Dolby Digital™ surround sound:

3. Connect one end of the digital audio cable supplied with the TV to the DIGITAL AUDIO OUTPUT on the back of the TV (connect the end of the cable with the ferrite or plastic cylinder). Connect the other end to the COAXIAL DIGITAL INPUT on the back of the A/V Receiver. Check the Owner's Guide for the A/V Receiver for information concerning the use of the digital input and switching between the digital sound and analog stereo sound from the TV.

Note: Video connections shown are used primarily for recording to a VCR connected to the A/V Receiver.

Use only if connecting a Dolby Digital A/V Receiver

TV Rear Panel

Ferrite end

A/V Receiver Rear Panel

Attach only one cable type

Connecting a DVD Player

IMPORTANT

• **See Appendix B for component video signal compatibility information.**

• **For digital audio connections, see your A/V Receiver, DVD , and Satellite Receiver Owner's Guides.**

Connecting an S-Video Satellite Receiver

Figure 2. Connecting an S-Video Device.

DVD Player with Component Video
(Figure 1)

1. Connect the Component Video cables from Y/Cr/Cb or Y/Pr/Pb VIDEO OUT on the back of the DVD player to COMPONENT-1 on the TV back panel, matching the correct connection:

- **Y** to Y
- **Cr** or Pr to Pr
- **Cb** or Pb to Pb

2. Connect a set of audio cables from AUDIO OUT on the back of the DVD player to COMPONENT-1 AUDIO Input on the TV back panel. The red cable connects to the R (right) channel, and the white cable connects to the L (left) channel.

Important: If you add a second DVD or use any other inputs for your DVD, see the section on Editing NetCommand™ Setup to ensure this change is matched by the NetCommand™ system.

S-Video Satellite Receiver
(Figure 2)

1. Connect an S-Video cable from VIDEO OUT on the satellite receiver back panel to VIDEO INPUT-2 on the TV back panel.
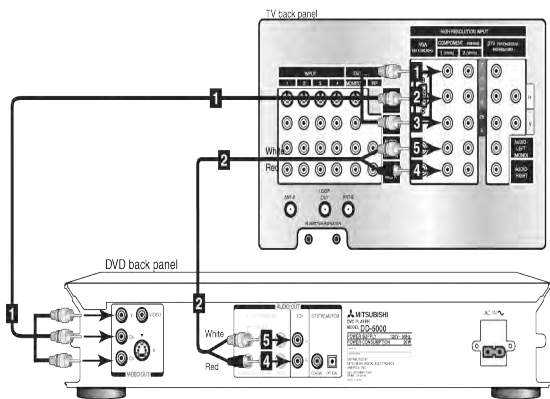
2. Connect a set of audio cables from AUDIO OUT on the satellite receiver back panel to the AUDIO INPUT-2, on the TV back panel. The red cable connects to the R (right) channel and the white cable connects to the L (left) channel.

Note: Refer to the Satellite Receiver Owner's Guide for Dish Antenna connections.

Important: If you add a second Satellite Receiver or use any other inputs for your Satellite Receiver, see the section on Editing NetCommand™ Setup to ensure this change is matched by the NetCommand™ system.

Connecting an External Digital TV (DTV or HDTV) Receiver

DTV Connectors and Adaptors
(Figure 1)

The TV back panel has 5 RCA-type connectors for the Input-DTV. The back panel of your external DTV receiver may use RCA-type connectors or BNC-type connectors. If your DTV receiver comes with BNC type connections, you will need to purchase BNC to RCA adaptors to connect the TV to the DTV receiver. These adaptors should be available at most electronic supply stores.

BNC to RCA Adaptor   BNC Connector   Adaptor Fitted to Connection   or   RCA Connector
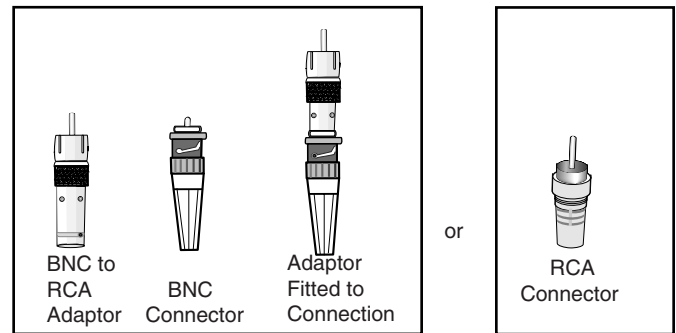
Figure 1. DTV connectors and adaptors.

External DTV Receiver with Component Video Connections
(Figure 2)

1. Connect the outside antenna, cable, or satellite to ANT, or SATELLITE IN on the DTV receiver (see your DTV receiver's owner's guide for instructions, and cable compatibility).

2. Connect the incoming terrestrial antenna, or cable (not satellite) to ANT-A on the TV back panel (a coaxial splitter, available at most electronic supply stores, may be required to complete this installation).

3. Connect RCA-type cables from the YPrPb outputs on the DTV receiver to Input-DTV on the TV back panel, matching the correct connections: (Y to Y) (Pr to Pr) (Pb to Pb).

DTV Receiver/TV Back panel

- **Y** to Y
- **Pr** to Pr
- **Pb** to Pb

Note: You may need to set the Input-DTV assignment to Y/Pr/Pb instead of RGB. Refer to the Edit NetCommand™ Setup for instructions on changing this setting.

4. Connect the L (left) and R (right) audio cables from the DTV receiver to Input-DTV AUDIO on the TV back panel.

Note: To utilize the benefits of a digital A/V receiver, connect your DTV receiver's digital audio out to a digital input on your digital A/V receiver.
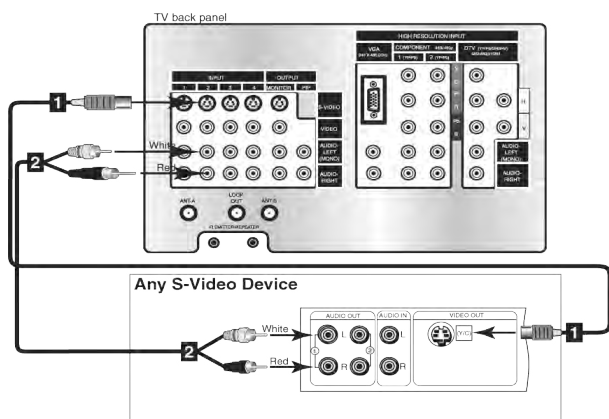

IMPORTANT

- **See Appendix B for component video signal compatibility information.**
- **For digital audio connections, see your DTV Receiver and A/V Receiver Owner's Guides.**
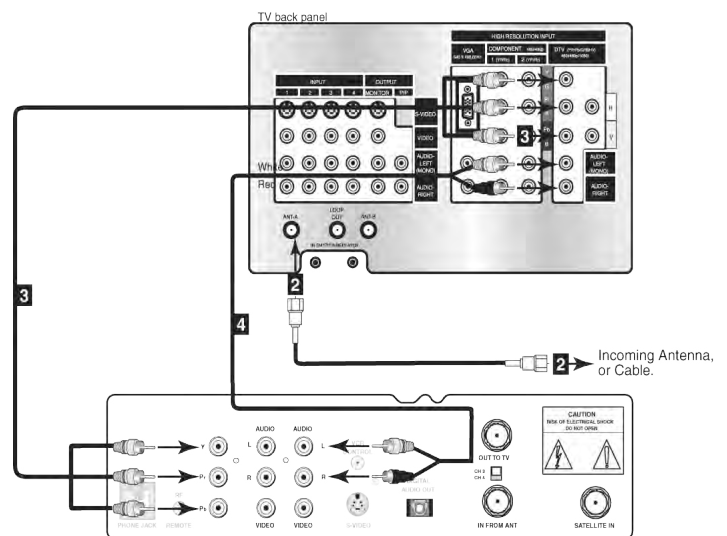
Figure 2. Connecting the DTV receiver with component video connections.

Connecting an External Digital TV (TV or HTV) Receiver, cont.

External DTV Receiver with RGB Video Connections
(Figure 1)
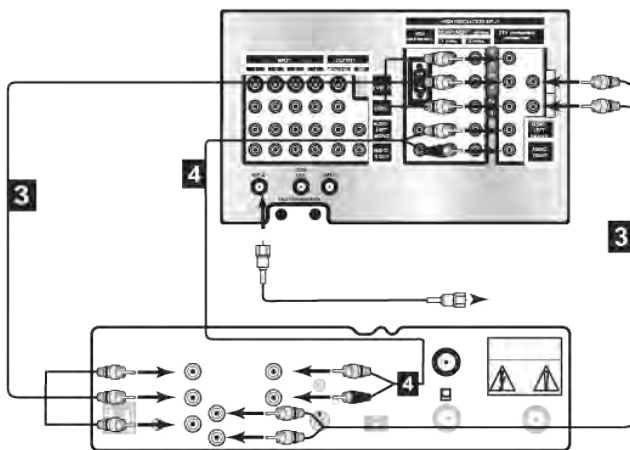
Figure 1. Connecting the DTV receiver with RGB video

1. Connect the outside antenna, cable, or satellite to ANT, or SATELLITE IN on the DTV receiver (see your DTV receiver owner's guide for instructions, and cable compatibility).

2. Connect the incoming terrestrial antenna, or cable (not satellite) to ANT-A on the TV back panel (a coaxial splitter, available at most electronic supply stores, may be required to complete this installation).

3. Connect RGB cables for the DTV receiver to Input-DTV on the TV back panel.

Note: You may need to set the Input-DTV assignment to RGB instead of Y/Pr/Pb. Refer to the Edit NetCommand™ Setup for instructions on changing this setting.

DTV Receiver / TV Back Panel

- **G** (green) to Y/G
- **R** (red) to Pr/R
- **B** (blue) to Pb/B

Note: If the DTV receiver has outputs for H and V sync, connect as listed below (DO NOT connect if DTV receiver uses "Sync on Green"

- **H** (horizontal sync) to H
- **V** (vertical sync) to V

4. Connect the L (left) and R (right) audio cables from the DTV receiver to Input-DTV AUDIO on the TV back panel.

Connecting a Computer with a VGA Monitor Output

Connecting a Computer
(Figure 1)

1. Connect VGA Monitor Out from the computer to VGA Input on the TV back panel using a VGA compatible monitor cable. See *Appendix B* for VGA signal compatibility.

2. Connect the L (left) and R (right) audio cables from the computer to VGA AUDIO on the TV back panel. In cases where your computer's audio output is a single mini- jack, a splitter is needed to complete this connection.

Note: To utilize the benefits of a digital A/V receiver, connect your computer's digital audio out, if available, to a digital input on your digital A/V receiver.
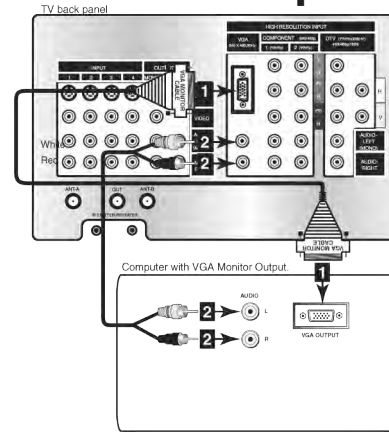
Figure 1. Connecting a computer with a VGA monitor output.

CAUTION: To ensure continued FCC compliance, the user must use a shielded video interface cable with bounded ferrite cores, when using the VGA input.

Connecting the IR-Home Theater Control and IR Repeater
(Figure 2)

IR Emitter-Home Theater Control
These emitters are not IR repeaters; they are used by the NetCommand™ feature to control supported devices.

1A. Connect the IR emitter to IR Emitter-Home Theater Control on the TV back panel.

OR ...

IR Emitter-Repeater
These emitters are not used by NetCommand™, but will repeat any IR command received by the TV. These emitters allow the TV to be the remote control sensor for other devices outside the range of the hand-held remote control. Do not use these repeaters with devices that can receive the remote control signal directly, as the signals can interfere with each other.

1B. Connect the IR emitter to IR EMITTER-REPEATER on the TV back panel.

Steps 2-4 (Apply both 1A and 1B)

2. Place the IR emitter cable under or along the side of the A/V device. Place the IR lens directly in front of the A/V device's infrared signal receiver. Infrared signal receivers are usually behind the front translucent panel of the device.

Figure 2. Connecting the IR Home Theater Control and/ or Repeater.

3. Place unused transmitters in an out-of-the-way location.

4. For permanent installation of the IR emitter cable, use the included adhesive tape to secure the bottom of the emitter to the anchoring object of your choice.

⚠ IMPORTANT NOTES ⚠

WARNING: **When using the VGA input, do not leave stationary, toolbar, or partial images on-screen for extended periods of time. Mix the types of pictures shown. Uneven picture tube aging is NOT covered by your warranty.**
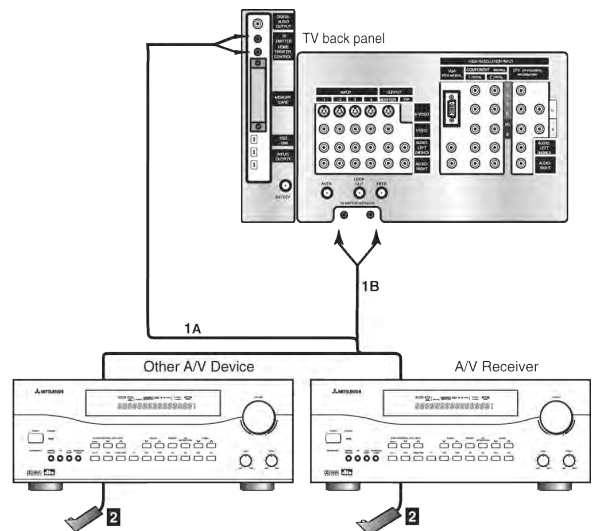
The VGA capability of this television is designed for occasional use ONLY.

It is not meant to be used as a work station or to view static or odd-shaped images for an extended period of time. Any device connected to your television via the VGA port, including, but not limited to, personal computer, game system, or digital set-top box, must have its screen saver function activated to prevent damage to the television. We **DO NOT** recommend the use of any external device that does not have a screen saver function with this television.

We recommend that screen saver activation time be set to less than five minutes when using a device through the VGA port. You should also use lower brightness and contrast settings. If your computer programs allow, toolbars should be set to hidden mode.

Please remember most computer programs and video game systems display static images, such as boxes, buttons, tool bars, and game scores that can damage the television if used for extended periods of time, repeatedly, or frequently.

The VGA input will automatically select the "Standard" screen format and fill the screen. No other formats are available with the VGA Input. Standard television overscan is used, so VGA images will be cropped on all sides. Resizing of some displays may be required. Consult your owner's manual for computers, computer programs and game systems for assistance with resizing display images. Please see page 70 for an explanation of uneven picture tube aging.

NetCommand™ Setup - Getting Started

In order to use your TV's NetCommand™ feature, you need to provide some detailed information during the setup of your Mitsubishi TV. You must define the Manufacturer of the devices that are connected to the television. For each device, the input to the TV and A/V receiver, and the names for the device are pre-set during Initial NetCommand™ setup. You may change those inputs or names using the Edit NetCommand™ screen.

On your remote control, the ADJUST ◄ (left) and ► (right) buttons allow you to navigate left and right to different selections on the screen. The ADJUST ▲ (up) and ▼ (down) buttons allow you to:

- Change the selected radio button
- Change selection in text boxes
- Show text boxes

The **ENT** (ENTer) button allows you to:

- Confirm the selected character when naming a device
- Add or delete check marks in check boxes
- Select push buttons to change screens

Radio Buttons

The setting changes when radio button is selected

Checkbox

Checkmarks indicate the item or input is added or turned On. Press ENTer when the Checkbox is highlighted to add or delete a checkmark. When viewing the Review screen, a Checkbox reflects which devices are turned On or Off, or connected to the TV.

Textbox

Mitsubishi 1

Press ADJUST ▲ (up) and ▼ (down) to make a selection.

Buttons

Much like the software on your computer, you will use graphic buttons to navigate through the NetCommand™ Setup screen. Highlight the button and press ENTer to select the function.

<Back Button   < Back

Use the <Back button to navigate back to the previous screen.

Next> Button   Next >

Use the Next> button to navigate forward to the next screen.

Cancel Button   Cancel
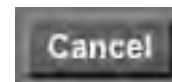
The Cancel button will cancel out any changes you are currently making without saving them into memory. When you select the Cancel button, NetCommand™ will prompt you to confirm that you want to cancel the changes you are currently making. If you select Cancel during Initial Setup, You can setup NetCommand™ later by selecting Initial on the Edit NeCommand™ menu.

Programming the Remote Control to Control NetCommand™

NetCommand™	CODE to ENTER
TV Control and NetCommand™ Devices:	**935**

Figure 1. Programming the TV remote to control your NetCommand™ A/V devices.

To Program the Remote to Control the TV and NetCommand™ A/V Products:

(See NetCommand™ Supported Devices, for the list of A/V products supported by the NetCommand™ System.)

   1. Move the slide switch at the top of the remote to the TV layer.

   2. Press and hold the POWER button on the remote control.

   3. Enter the three digit code of 935, and then release the POWER button on the remote control.

   4. The remote control is now programmed to send NetCommand™ signals to the TV. The TV can also control the IEEE 1394 devices and selected NetCommand™ supported IR devices. See the NetCommand™ guide for details.

NetCommand™ Setup

When you first power On your new Mitsubishi TV, the initial setup screens will appear. You will need to navigate through these screens and properly set up the equipment connected to the TV in order to use NetCommand™.

NetCommand™ supports the automatic switching of audio and video inputs using only the TV Remote Control.

> ### IMPORTANT
> You may use your TV without setting up NetCommand™. You may also setup NetCommand™ at a later time by choosing Setup from the Main menu, then select Edit NetCommand™.

Language Screen
Figure 1
The Language screen is the initial menu displayed the first time the TV is turned On. You will need to select the language you would like to use. When you change your selection from English to Spanish, all screens automatically change to Spanish. To change Language later, go to Setup in the Main Menu.
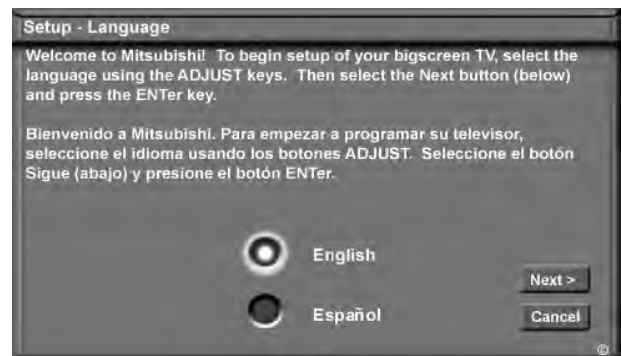
Figure 1. Setup-Language screen.

Information Screen
Figure 2
The Information Screen describes how to proceed with or cancel the initial NetCommand™ Setup.

NetCommand™ Setup is initialized automatically the first time you power On your new TV. If, for any reason, your NetCommand™ Setup is cancelled before completing, follow the steps below to start NetCommand™ setup later.

Figure 2. NetCommand™ Info screen.

1. Display the TV Main menu.
2. Select the Setup menu.
3. Select the Edit NetCommand™ option in the Setup menu.
4. Select Initial on the Edit NetCommand™ menu
Result: The AV Receiver screen displays.

NetCommand™ Setup, cont'd.

Figure 1. A/V Receiver screen.

A/V Receiver Screen
Figure 1

The A/V Receiver screen allows you to select the manufacturer of the A/V Receiver you are currently using. When a compatible model is used, NetCommand™ will be able to change inputs and adjust volume on the A/V Receiver. The bottom of the screen shows the model optimized for NetCommand™. Other models from the same manufacturer are often compatible. If the manufacturer's name is followed by a number, this indicates additional models are optimized. Select "Other" if you have an A/V Receiver or stereo system from a non-compatible manufacturer. NetCommand™ will not be able to control that A/V Receiver. Select "None" if you do not have an A/V Receiver or a stereo system.
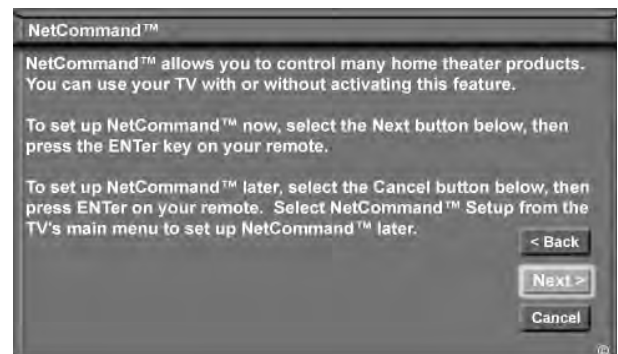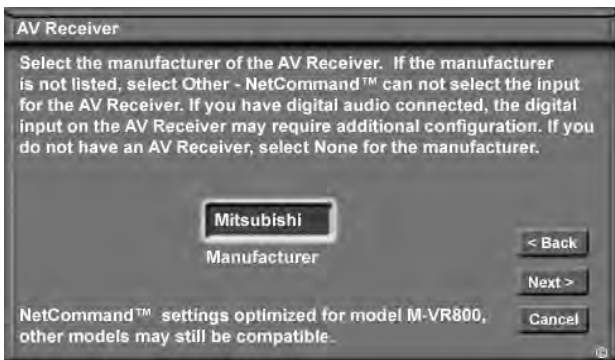

Figure 2. Cable box screen.

Cable Box Screen
Figure 2

The Cable Box screen allows you to select the manufacturer of the cable box you are currently using. If "Other" is selected for the Manufacturer, then NetCommand™ cannot control the device (use the layer switch on the remote control or use the remote for the device). The bottom of the screen shows the model optimized for NetCommand™ programming. Other models from the same manufacturer are often compatible. If the manufacturer's name is followed by a number, this indicates additional models are optimized. For the Manufacturer, select "None" if you don't have a cable box.
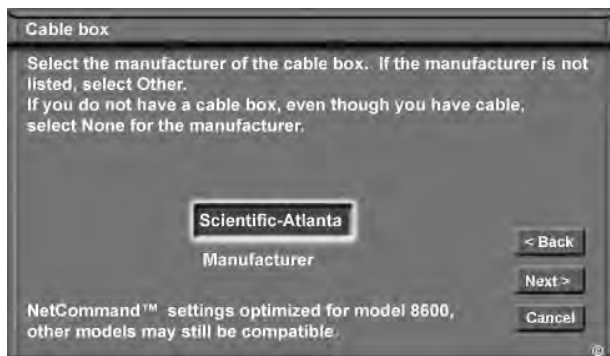
Note: Your Cable Box should be connected to Ant-B or your VCR. Also, Channel 3 is the default output channel for the Cable Box. If either the connections or output channel are different, use the Change option in the Edit NetCommand™ menu to apply the changes.
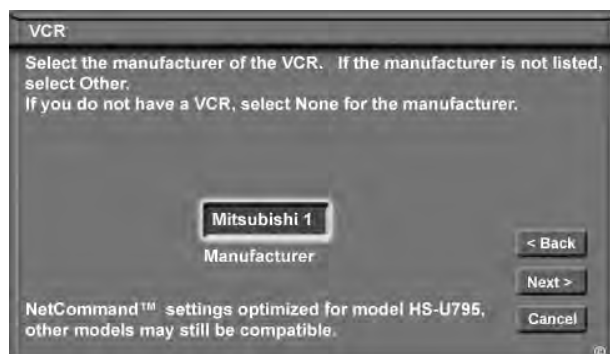

Figure 3. VCR screen.

VCR Screen
Figures 3

The VCR screen allows you to select the manufacturer of the VCR you are currently using. If "Other" is selected for the Manufacturer, then NetCommand™ cannot control the device (use the layer switch on the remote control or use the remote for the device). The bottom of the screen shows the model optimized for NetCommand™ programming. Other models from the same manufacturer are often compatible. If the manufacturer's name is followed by a number, this indicates additional models are optimized. For the Manufacturer, select "None" if you don't have a VCR.

NetCommand™ Setup, cont'd.

DBS Screen
Figure 1

The DBS (Digital Broadcast Satellite) screen allows you to select the manufacturer of the satellite system you are currently using. If "Other" is selected for the Manufacturer, then NetCommand™ can not control the device (use the layer switch on the remote or use the remote for the device). The bottom of the screen shows the model optimized for NetCommand™ programming. Other models from the same manufacturer are often compatible. If the manufacturer's name is followed by a number, this indicates additional models are optimized. For the Manufacturer, select "None" if you don't have the device.
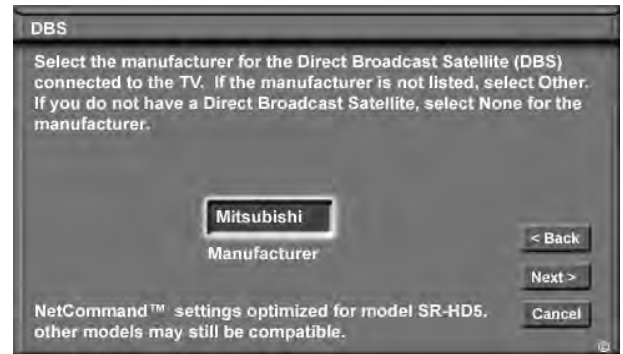
Figure 1. DBS screen.

Camcorder Screen
Figure 2

The Camcorder screen allows to indicate whether or not you have a camcorder connected to the TV. You may want to reserve an input for your camcorder. While your Camcorder cannot be controlled by NetCommand™, you can still switch to the Camcorder input when you would like to view your camcorder. Keep the box checked to reserve Input 5 (Front Panel) for your Camcorder. Remove the check mark to turn off Input 5.
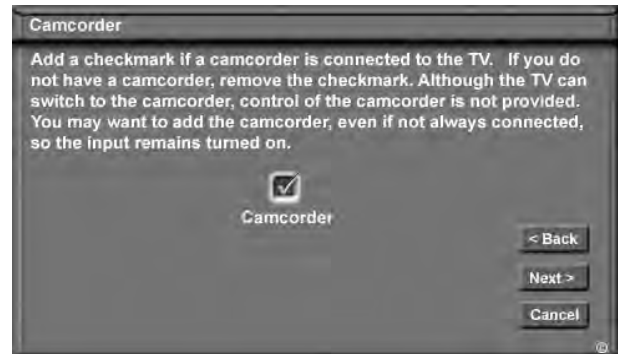
Figure 2. Camcorder screen.

DVD Screen
Figure 3

The DVD screen allows you to select the manufacturer of the DVD Player that you are currently using. If "Other" is selected for the Manufacturer, then NetCommand™ can not control the device (use the layer switch on the remote or use the remote for the device). The bottom of the screen shows the model optimized for NetCommand™ programming. Other models from the same manufacturer are often compatible. If the manufacturer's name is followed by a number, this indicates additional models are optimized. For the Manufacturer, select "None" if you don't have the device.
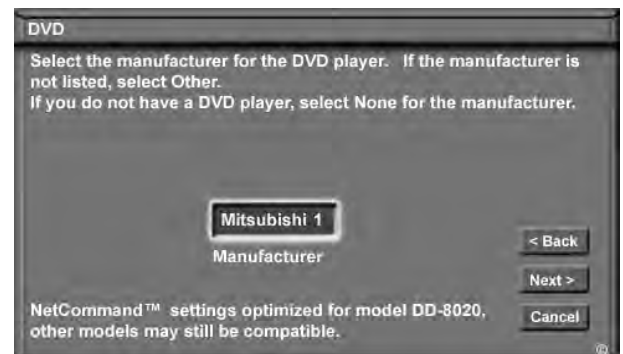

Figure 3. DVD screen.

NetCommand™ Setup, cont'd.
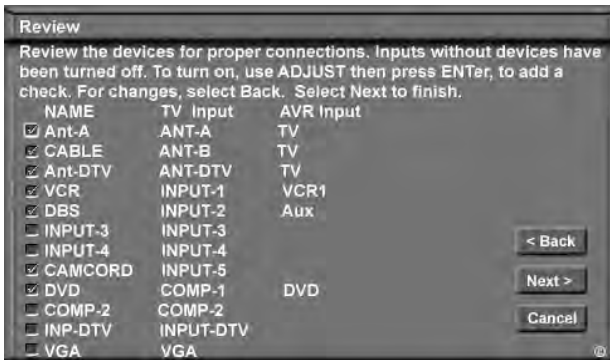
Figure 1. Review screen.

Figure 2. Finish screen.

Review Screen
Figure 1

Once you have finished the setup screens and selected the manufacturer for each device, you will see the Review Screen. It is important to review the settings. If necessary, you can navigate back through the NetCommand™ Setup screens to make changes. On this screen, adding or deleting check marks will turn On or Off the adjacent Input or Device.

Note: The Review screen lists TV and A/V Receiver inputs used with each device. Verify that these are the inputs you used when you connected the devices. If you have not connected your devices, write down these inputs as a guide. If you cannot use these inputs, or if you would like to change the name of a device, use the instructions for Edit NetCommand™ to make necessary changes.

Finish Screen
Figure 2
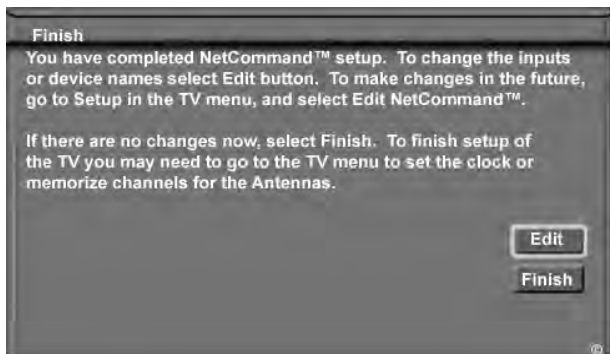
When the Finish screen is displayed, all selections are finalized. Select Finish to complete setup.

Note: If you wish to change any of the pre-configured inputs or names for the devices, or add devices not in the pre-configured setup, select the Edit button to display Edit NetCommand™ menu.

You still need to memorize the available channels for Ant-A, Ant-B and Ant-DTV by going to the Main menu and selecting Antenna. Instructions to memorize channels are found in the Antenna menu.

Edit NetCommand™

Realizing your home theater system will continually change as you add and remove components, Mitsubishi's NetCommand™ also offers ease of use when it comes to editing your home theater configuration.

Edit NetCommand™ Screen
Figure 1

When you need to make a change to your current setup, the Edit NetCommand™ screen makes it easy. Possible choices, although not always available, are Add, Change, Delete, Review, or Initial.
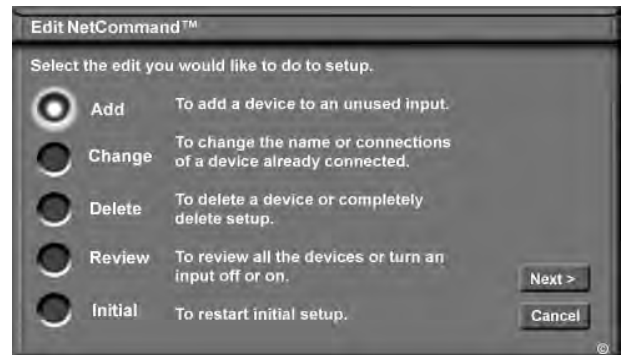
Figure 1. Edit NetCommand™ screen .

Add
Figure 2

When you select Add from the Edit NetCommand™ screen, you will see the New Device Screen. Select the Device Type that you would like to add. Next, you will select the manufacturer, name the device and select the inputs for the TV and A/V Receiver.

Figure 2. New Device screen.

Change
Figure 3

When you select Change from the Edit NetCommand™ screen, the Change screen appears. You will need to select the device that you would like to change by the device name. You can change the name or input connections to the TV and A/V Receiver. Other settings may be available for some devices.

Figure 3. Change screen.

After selecting Next> from the New Device or Change screen, the selected device will be displayed.

Edit NetCommand™, cont'd.

Figure 1. Delete screen.

Delete
Figure 1

When you select Delete from the Edit NetCommand™ Screen, you will see the Delete Screen. You can choose to delete just a single device by selecting the device you would like to delete, or you can delete the entire NetCommand™ configuration. After you have chosen the device, or the Entire Configuration, you will be prompted to confirm your choice to delete. If you select the Entire Configuration, the Initial button becomes available on the Edit NetCommand™ screen.

Figure 2. Review screen.

Review
Figure 2

When you select Review from the Edit NetCommand™ Screen, you will see the Review Screen. This is the same Review Screen from the Initial Setup.

On this screen, adding or deleting check marks will turn On or Off the adjacent Input or Device.
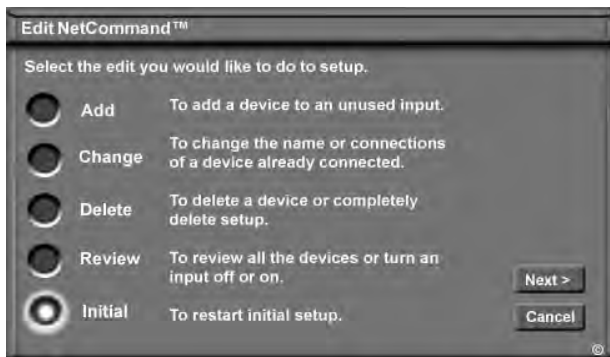
Figure 3 Edit NetCommand™ (Initial) screen

Initial
Figure 3

If, for any reason, you cancelled out of the Initial Setup before completion, or if you deleted the entire configuration, select Initial from the Edit NetCommand™ Screen to go through initial setup again, starting with the A/V Receiver screen.

IMPORTANT

NetCommand™ does not allow you to delete a device or change the connections for a device (like a VCR or a DVD player) if the device is currently in use.

Switch the TV to a different device from the one you are changing or deleting. To change the A/V Receiver, you need to be listening to the TV speakers.

Edit NetCommand™, cont'd.

The following screens are a part of the Add device or Change device modes.

Name Screen
Figure 1

The Name screen allows you to change the default name for each device to a custom name of up to eight characters (including a blank space), selecting from letters, numbers, and nine different characters. Use ▲ ▼ to select each letter, then press ENTER to move to the next position. Press CANCEL to delete the current letter and move back one character position. When in the first position, the CANCEL button will return the name to the default name.
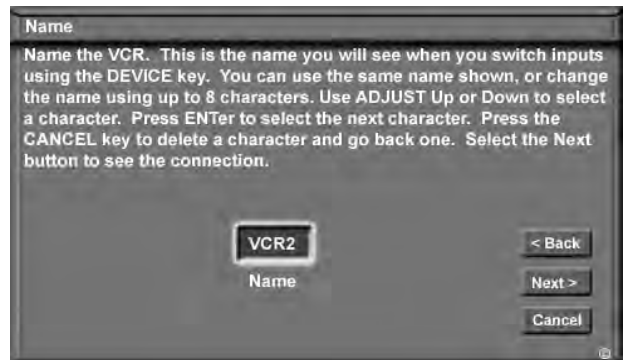
Figure 1. Name screen.

RF Connection for Cable Screen
Figure 2

The RF Connection screen displays only when Adding or Changing a Cable Box. If your Cable Box is connected to a TV Antenna input, make sure the RF checkbox is checked. Select which TV antenna input is used with the Cable Box. If the Cable Box is also connected to a VCR, select which VCR.

If your Cable box is connected using Audio/Video cables, make sure the RF checkbox is unchecked. The Connection screen will follow to allow the selection of the TV input used with the Cable Box.
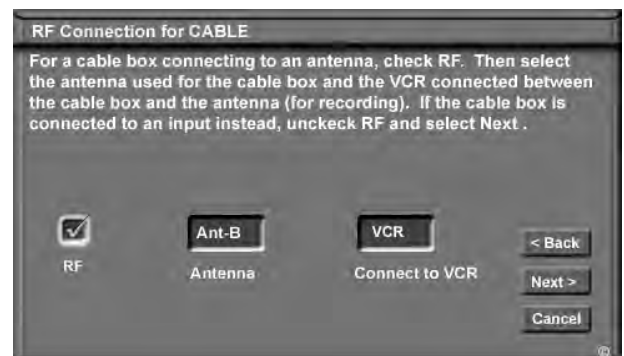
Figure 2. RF Connection for Cable screen.

Fixed Channel Screen
Figure 3

If the device being connected is a cable box and the "RF" box (on the previous screen) is checked, the Fixed Channel screen allows you to select the channel number used for output by your cable box.
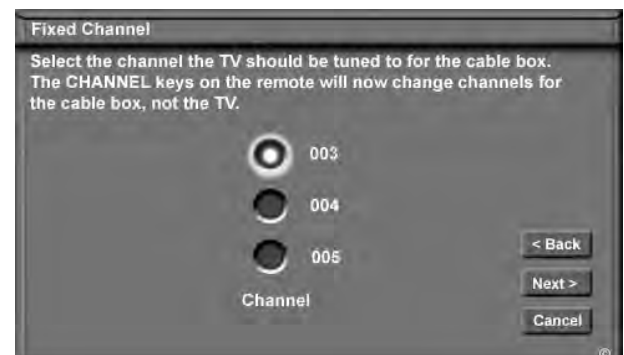
Figure 3. Fixed Channel screen.

Edit NetCommand™, cont'd.
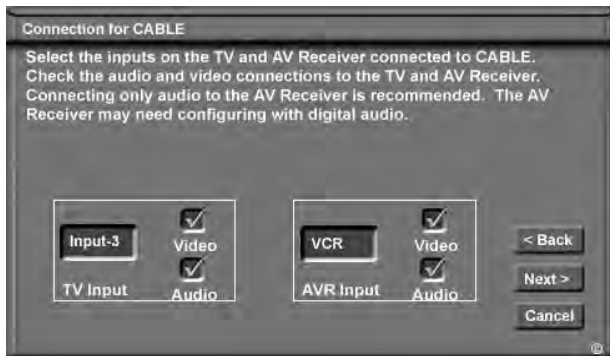
Figure 1. Connection screen - Cable (example)

Connection for Device Screen
Figure 1

The Connection screen allows you to select the inputs used with the devices that are connected to the TV Inputs 1-5, Components 1&2 and Input-DTV. It also allows you to select which input the device is connected on the A/V Receiver. Add or remove check marks to indicate what type of connections (Audio, Video or Both) are used with each input.

Note: Video inputs to the A/V Receiver are normally used to transfer signals to the line input of a VCR for recording.

Figure 2. Monitor Out to AVR screen.

Monitor Out to AVR Screen
Figure 2

This screen is shown only if an A/V Receiver is the device being added or edited. The Monitor Out to AVR screen allows you to select the input on the A/V Receiver that is connected to the Monitor Output of the TV. This connection allows recording of signals from the TV monitor output through the A/V Receiver to an analog VCR.
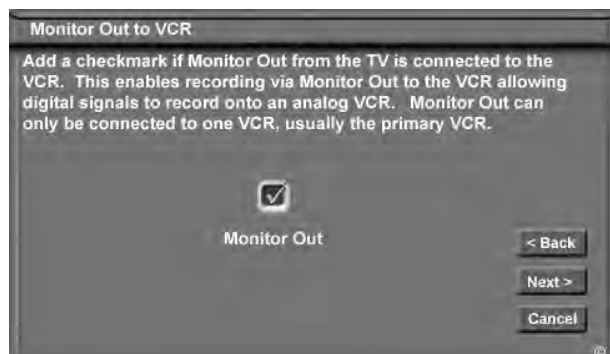
Figure 3. Monitor Out to VCR screen.

Monitor Out to VCR Screen
Figure 3

This screen is shown only if an A/V Receiver is not connected. This connection allows recording of signals from the TV via monitor output to an analog VCR. The Monitor Out to VCR screen confirms the connection.

Edit NetCommand™, cont'd.

AVR to VCR Connection Screen
Figure 1

This screen is displayed only when a VCR is the device being added or changed.   The AVR to VCR Connection screen allows you to confirm the connection of the A/V Receiver's record output to the VCR's line input. This connection allows recording of signals from the TV Monitor output, through the A/V Receiver, to analog VCR.

If you have more than one VCR, only one VCR can be used for setup of recordings by NetCommand™. This is also true when using both a legacy VCR and the analog side of a DVCR. When connecting cables from the AV Receiver to the VCR, take care when selecting the VCR which will then be used for all recordings by NetCommand™. Ensure that this screen is correctly checked for the only device connected to the AV Receiver."

Input-DTV Connection Screen
Figure 2

This screen displays only if the device selected in the Connection screen is connected to Input-DTV. The Input-DTV Connection screen allows you to select which connection type, RGB or Component Y/Pb/Pr you are using to connect your cable box, DBS, or HDTV Receiver when connected to Input-DTV.

IR Code for [Device] Screen
Figure 3

This screen only displays if a device added has the same IR code as a device previously added. You can specify the IR setting for the new device. For example, for the second Mitsubishi VCR you can specify the IR Code setting to VCR-B, if the primary Mitsubishi VCR is using the VCR-A IR code.

Figure 1. AVR to VCR Connection screen.
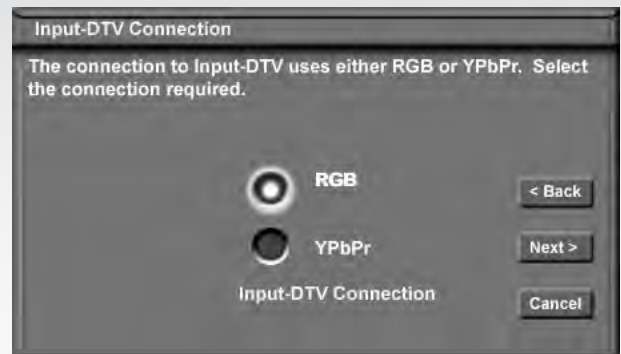
Figure 2. Input-DTV Connection screen.

Figure 3. IR Code screen - (VCR2 example).

In This Section . . .

3

CHAPTER THREE

3D Graphical ▶ViewPoint® Menu System

Your TV has a special control system called NetCommand™ that will control IEEE 1394 devices and selected older devices. For instructions on operating these control features, see the NetCommand™ guide.

Your TV also has Mitsubishi's exclusive 3D Graphical ▶ViewPoint® on-screen operating system, which provides on-screen information for menu choices and changes (Figure 1).

A picture (icon) will be highlighted when selected with the ADJUST arrows. When selected, the appropriate menu appears. You may then make changes within the menu or access sub-menus, if available.

You can also access sub-menus from a button. Sometimes, when you select a button an automatic function begins.

The ▶ViewPoint® system includes the following special features:

• The currently selected icon or button is highlighted with a yellow outline; the text color is yellow.
• On-screen instructions, shown in the message line at the bottom of the menu, provide feature selection and adjustment information.
• Some on-screen menu options must be set before other options are available. For example, the *"Timer"* can be set and turned ON only after *Set Time* and *Set Day* have been completed in the *Clock* menu.

The following buttons on your remote control help you navigate within the ▶ViewPoint® system (Figure 2):

1. **ADJUST** ◀ or ▶ to select the menu item you want to change.
2. **ADJUST** ▲ or ▼ to change the settings.
3. **ENT**er to enter into a menu, start an automatic function, or select a checkbox.
4. **CANCEL** to clear a setting, or stop an automatic function.
5. **MENU** to move back one menu screen at a time.
6. **HOME** to exit all menus and return to TV viewing.

Figure 1. Main Menu: The Main Menu screen will always be the first screen that appears when you press the MENU button.

You can change text boxes using the ADJUST ▲ or ▼ buttons. Some text boxes have preset labels. Other boxes allow you to select letters, numbers, or characters to customize names.

When customizing names, use the ADJUST ▲ or ▼ buttons to select letters, numbers, or characters. Use the ENTer key to move to the next character position. Use CANCEL to erase letters, numbers, or characters or move one space backward.
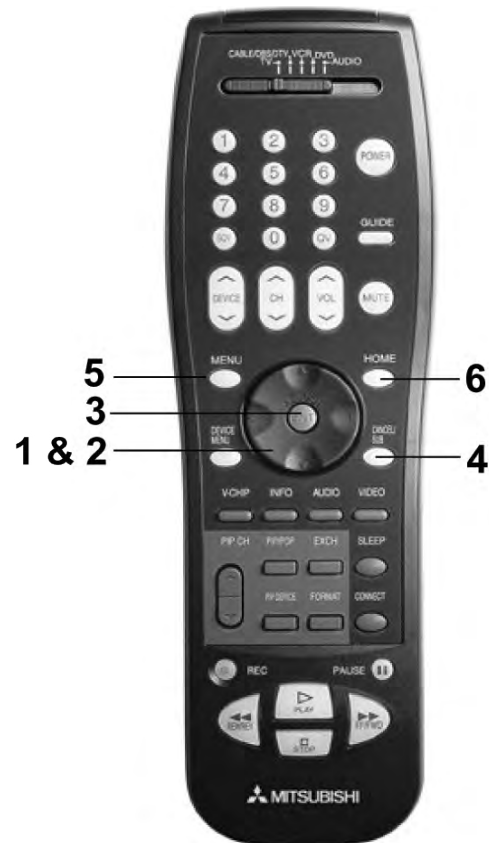
Figure 2. These buttons are used to navigate within the ▶ViewPoint® on-screen operating system.

Device Selection Menu

When you press the DEVICE button on your remote control, the Device Selection menu appears. When NetCommand™ has not been setup, the Device Selection menu allows you to select the input for viewing. When NetCommand™ is setup the Device Selection menu allows you to select the device for viewing, select audio from the TV speakers or A/V Receiver, power compatible devices On or Off, and verify the destination of signals. Additional Device Selection menu functions are explained in the NetCommand™ Guide.

Video Section   **Connection Section**   **Audio Section**

Device Section

Figure 1. Device Selection menu after NetCommand™ has been setup.

Device Section

When the Device Selection menu is displayed, the **Device** or **Input** you are currently viewing shows a gold-colored icon.

To select another device or input, use the ADJUST button, ◄► ▲ or ▼ to move the yellow highlight among the devices. Press ENTer to select the device you would like to view and hear. The TV inputs are automatically changed. If NetCommand™ is setup, the inputs on compatible A/V Receivers are automatically changed at the same time.

Power On/Off Devices

Some devices will power On automatically when you select to use the device. These devices will power Off automatically when you turn Off the TV. For devices that do not power On or Off automatically display the Device Selection menu, ADJUST ◄ or ► to highlight the device icon and press POWER on the remote control. For the A/V Receiver, press the AUDIO button to move the navigation to the Audio Section. Highlight the A/V Receiver icon and press POWER. If you press POWER on the remote control when the Device Selection menu is not displayed, the TV will turn Off.

Audio Section

When a NetCommand™ compatible legacy IR controlled A/V Receiver, or HAVi amplifier has been connected to the TV and added to NetCommand™ Setup, an icon for this device will appear in the audio section. Use the AUDIO button to change navigation to the audio section. Then use the arrow buttons to select the TV speakers icon or the A/V Receiver icon. Press ENTer to change the audio selection. Use the DEVICE button to return the navigation to the Device Section.

Video Section

The TV icon is the destination for the currently selected device. This is shown in the Video Section.

Connection Section

The Connection Section shows the other devices that are currently connected to the device highlighted in the Device Section.

For example, if the Digital VHS (D-VHS) is currently recording from ANT-DTV, when you move the highlight to the ANT-DTV icon, the D-VHS icon will appear in the Connection Section. This icon will disappear when you move the highlight to another icon.

IMPORTANT

Only devices that were designed by their manufacturers to respond to separate On and Off remote control signals will be able to turn On automatically. Not all manufacturers provide this ability for their products.

PIP/POP Selection Menu

PIP Device Selection Menu
Figure 1

When you press the PIP DEVICE button on the remote control, the PIP Selection menu displays. The PIP Selection menu is similar to the Device Selection menu except the source for the sub picture in the Video Section is selected and the Audio and Connection Sections are not displayed.

Use the ADJUST ◀▶ ▲ or ▼ to move the yellow highlight to the Device you want to show in the PIP or POP image then Press ENTer. Device icons in gray are not available for use as PIP/POP sources.

Video Section
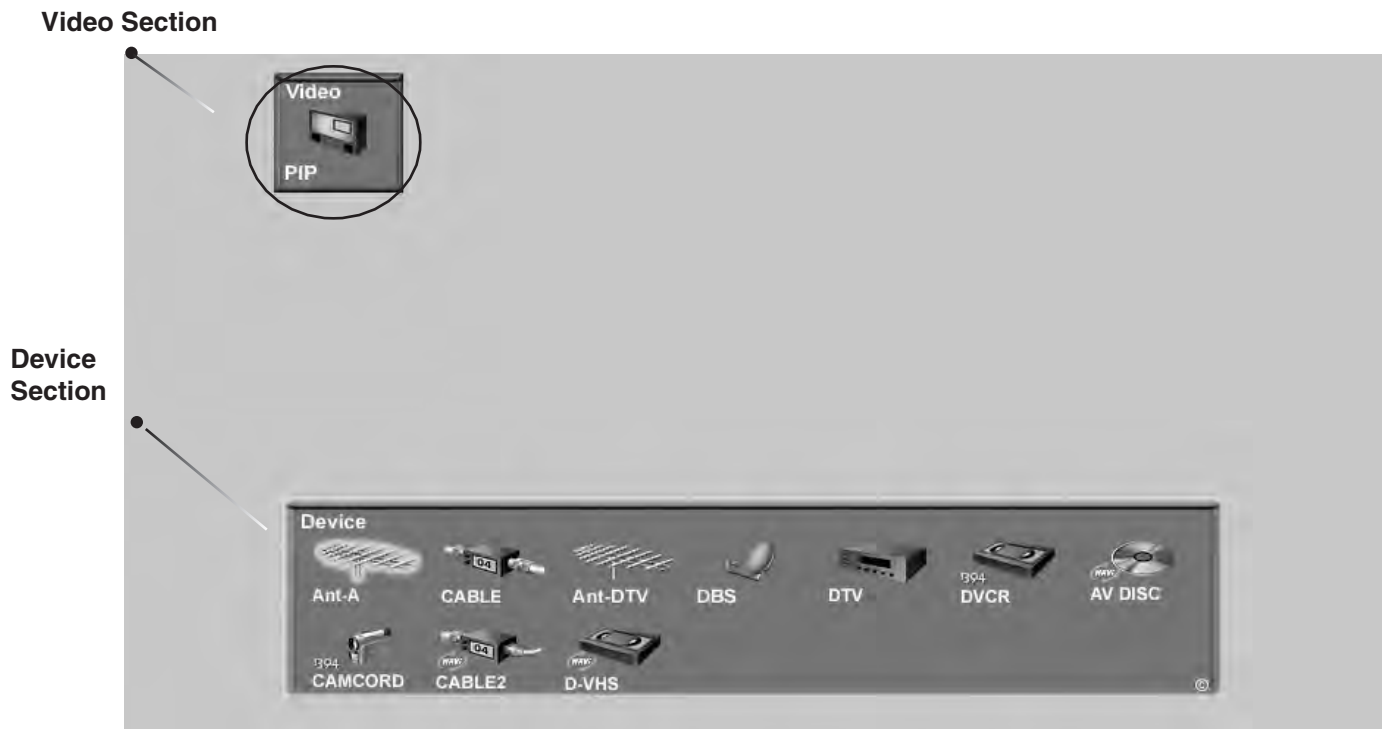
Device Section

Figure 1. PIP Selection Menu

Menu Screens (Overview)
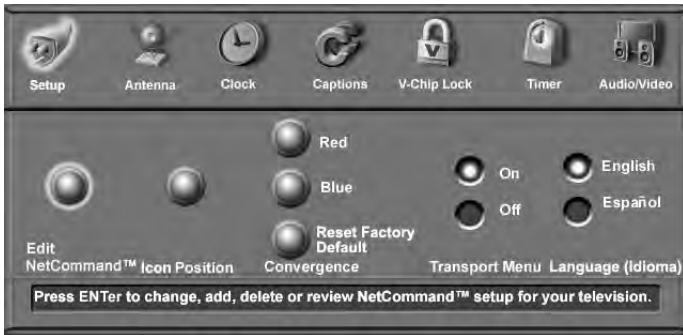
Figure 1. Setup Menu

Setup Menu
(Figure 1)

You can add, change, review or delete NetCommand™ settings and devices. You can also change the order of icons displayed on the Device Selection menu, select convergence adjustment, turn on or off the transport menu, and select English or Spanish as the language for the menus and on-screen displays.

Figure 2. Antenna Menu

Antenna Menu
(Figure 2)

Use to memorize locally available channels for Ant-A, Ant-B and Ant-DTV. You can manually add or delete channels from memory, name channels for Ant-A and Ant-B, or add your favorite channels to a SQV (SuperQuickView™) list.

Figure 3. Clock Menu

Clock Menu
(Figure 3)

Manually set the time for the TV, or select Auto and the TV will automatically set the time based upon Extended Data Service (XDS) time data. This time data is usually broadcast by your local PBS station.

Menu Screens (Overview)

Captions Menu
(Figure 1)

Display Closed Captions if sent by the broadcaster. Select the background color for the Closed Captions display. Enter the Digital Settings sub-menu or automatically display the Digital Channel Guide as the channels are changed.

Figure 1. Captions Menu

V-Chip Lock Menu
(Figure 2)

Block or allow programing based upon rating signals sent by the broadcast station, lock by time, or disable or re-enable the front panel buttons.

Figure 2. V-Chip Lock Menu

Timer Menu
(Figure 3)

Set your TV to tune to a pre-selected device and channel and turn on if the TV is Off.

Figure 3. Timer Menu

Audio/Video Menu
(Figure 4)

A/V Memory Reset allows you to return A/V settings to the original factory settings for the selected device. You can also adjust some or all of the A/V settings, display a blue screen when viewing a device with no signal, choose to enhance the darker parts of bright pictures or turn the TV speakers On or Off.
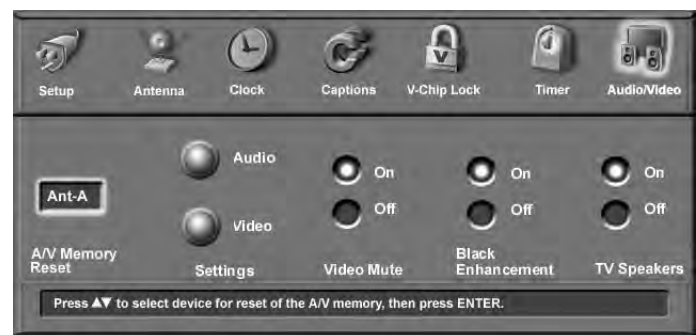
Figure 4. Audio/Video Menu

Setup Menu: Edit NetCommand™ Icon Position
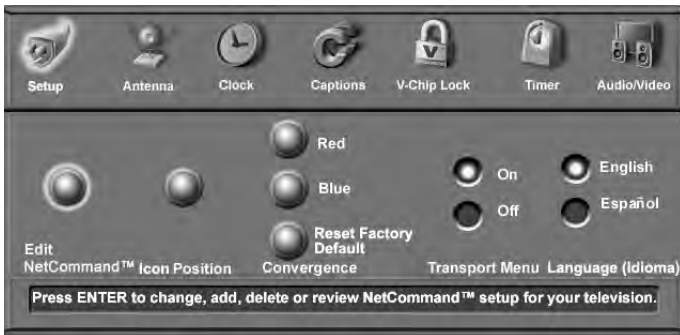
Figure 1. Setup Menu

Edit NetCommand™ Button
(Figure 1)

The Edit NetCommand™ button displays the Edit NetCommand™ menu (refer to Edit NetCommand™ section in Part 2 of this book.) Edit NetCommand™ provides the following options:

- **ADD** - Addition of new devices.
- **CHANGE** - Change or edit traditional devices and IEEE 1394 devices.
- **DELETE** - Delete a single device or delete the entire setup configuration.
- **REVIEW** - Review all devices connected to the TV, including IEEE 1394 devices and turn devices and unused inputs On or Off.
- **INITIAL** - Allows initial setup, in the event NetCommand™ setup was cancelled or if the entire configuration was deleted.

Figure 2. Icon Position Menu

Icon Position Menu
(Figure 2)

Selecting the Icon Position menu screen allows you to arrange the device icon order on the Device Selection menu to your preferred sequence to make the operation of the TV easier.

Use ADJUST ▲ ,▼ ,◀ , or ▶ to highlight the icon to be moved and then press ENTer. Use ADJUST ▲ ,▼ ,◀ , or ▶ to move the icon to the desired position and then press ENTer to secure the icon in the new position.

Setup Menu: Convergence

Convergence Menu
(Figure 1)

Your Mitsubishi TV has three picture tubes which need to be aligned to properly converge the projected light beams on the screen. Each picture tube projects a single color of red, blue or green. During production, your TV was carefully adjusted to properly align these colors. However, moving the TV, the TV's location in relation to the Earth's magnetic poles, and the passage of time can cause these adjustments to change. As a special feature, you have the ability to adjust the red and blue light beams in reference to the fixed green light beam. This process is called convergence. There are two separate memories for convergence. One, for SD 480i/480p signals; the other for HD 1080i signals. SD convergence should be adjusted while watching an SD source; likewise, HD convergence should be adjusted while watching an HD source.

The TV should be fully warmed up before adjusting Convergence. Turn the TV On and wait at least 30 minutes before making adjustments.

Figure 1. Setup menu, (Convergence selected)

Reset Factory Defaults Menu
(Figure 2)

This allows you to reset the convergence to the original factory settings. The message "Convergence reset completed" will be displayed when the factory defaults have been restored.
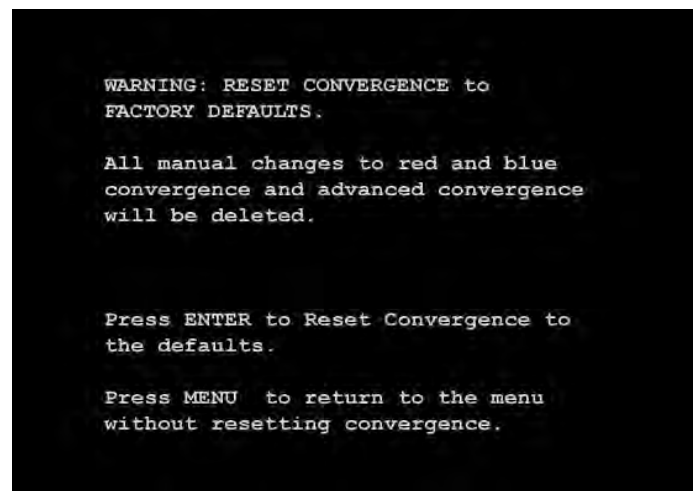
Figure 2. Reset Factory Defaults menu

Convergence Menu
(Figure 3)

When the Red and Blue crosshairs are properly converged, the center-screen crosshairs will appear white. You can use ▲, ▼, ◀, or ▶ to move the Red and Blue crosshairs. Press VIDEO to switch between Red and Blue. Press AUDIO for the Advanced Convergence screen, and see *Advanced Convergence*, page 45, for instructions.
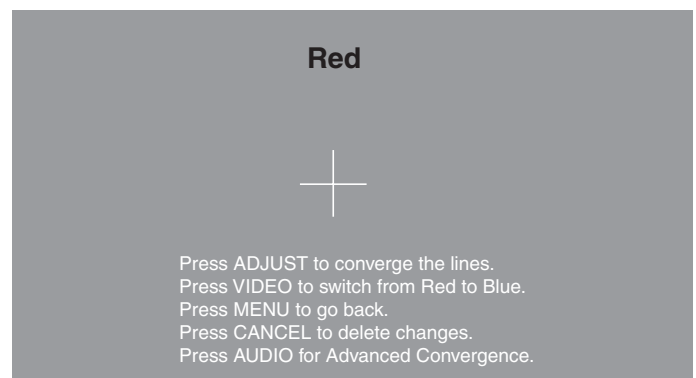
Figure 2. Convergence screen

Setup Menu: Advanced Convergence, Transport Menu, and Language
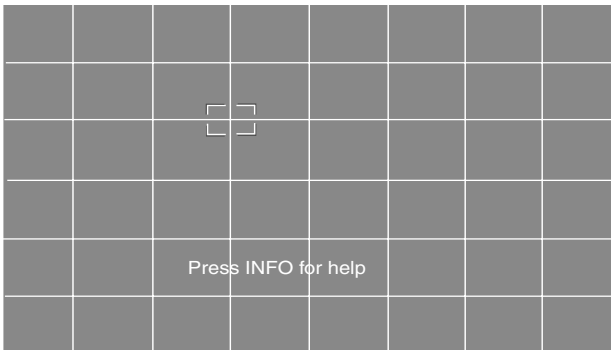
Figure 1. Advanced Convergence menu

IMPORTANT

There are more than 64 line intersections but the flashing bracket only stops at the 64 adjustment positions.
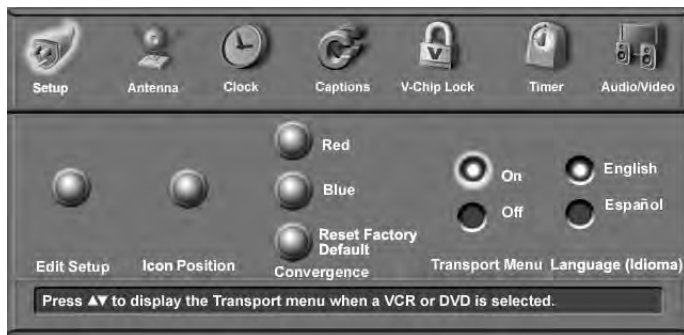
Figure 2. Setup menu (Transport menu selected)

Figure 3. Transport menu

Advanced Convergence Menu
(Figure 1)

After adjusting the Red Convergence and Blue Convergence, you can fine-tune your TV by adjusting the Red and Blue convergence at 64 individual points.

1. Move the flashing bracket to a position needing adjustment by pressing ▲, ▼, ◀, or ▶.
2. Press ENTer to select the position (flashing will stop).
3. Move the Red or Blue line by pressing ▲　▼, ◀, or ▶.
4. Press VIDEO to switch between the Red and Blue lines. A position is properly converged when all three lines combine to appear white.
5. Press ENTer to deselect the position (flashing will resume), and move the brackets to the next position needing adjustment.
6. When completed, press MENU or HOME to save your changes, and exit the Advanced Convergence screen.
7. Press INFO to display detailed instructions on using the Advanced Convergence. Then press INFO or MENU to return to the Advanced Convergence menu.

Language Menu
(Figure 2)

Display the on-screen menus in either English or Spanish (Español). The first time your TV was powered on, you were requested to select an on-screen menu language. When the radio button setting is changed, the screen language changes automatically.

Transport Menu
(Figures 2 and 3)

The Transport Menu is used by NetCommand™ to control VCRs, DVDs, IEEE 1394 AV Disc, digital VCRs, and similar devices. This menu can be turned off if you would rather not have it displayed. The transport buttons on the remote control will continue to operate these devices. See the NetCommand™ Guide for further details.

Antenna Menu: Antenna, Memorize Channels, Channel, Memory and Name

Antenna Menu
(Figure 1)

Select Ant-A, Ant-B, or Ant-DTV for use with the rest of the option on the Antenna Menu. You can memorize channels, add or delete channels, and add channels to an SQV (Super Quick View™) list. For Ant-A and Ant-B, you can name channels.

Memorize
(Figure 1)

For ANT-A or ANT-B

Select either Air (when used with an indoor/outdoor antenna) or Cable (when used with direct cable) then press ENTer to start the automatic channel memorization process.

For ANT-DTV

Select Air when used with an indoor/outdoor antenna. Select Cable when used with Direct cable.

There are three types of Cable systems: Standard, IRC and HRC. To memorize Standard or IRC, select Cable; to memorize HRC, select Cable (HRC).

Check with your Cable company to determine which type of Cable system they use. If your cable company cannot help you, select Cable.

To stop the automatic channel memorization process, press CANCEL. Channels memorized before you pressed CANCEL are retained in memory.

After memorizing channels, the channels in the memory can be accessed in ascending or descending order or by pressing the CH ▲ or ▼ buttons.

Channel
(Figure 1)

Select the channel you want to add or delete from memory, name, or add to an SQV (SuperQuickView™) list.

Use ADJUST ▲ or ▼ to select the channel for editing or use the CH ▲ or ▼ buttons for only those channels already in memory.

Figure 1. Antenna menu

On Ant-DTV, when the broadcaster has sent a virtual channel number, the virtual channel number is shown in the text box and the original digital channel is shown below as a reference.

Memory
(Figure 1)

After the available channels have been memorized with *Memorize*, weaker channels viewed with Ant-A

or Ant-B can be added. Unwanted channels for Ant-A, Ant-B, or Ant-DTV can also be deleted. Use the CH ▲ or ▼ button on the remote control to see the channels in memory. Use Adjust ▲ or ▼ to select Added or Deleted for the channel shown in the "Channel" option box.

Name
(Figure 1)

Channels shown on Ant-A or Ant-B can be named (up to four characters). After you enter a name, it will appear on the TV screen, next to the channel number.

1. Use Adjust ▲ or ▼ to select each letter
2. Press ENTer to set the letter and move to the next letter position.
3. Press CANCEL to move back one position.

Antenna Menu: SuperQuickView™ (SQV™)

Figure 1. Antenna Menu

SQV (SuperQuickView™)
Using The Menu Screen
(Figure 1)

SQV (*SuperQuickView*™) allows you to put together lists of your favorite channels from Ant-A, Ant-B and Ant-DTV. You can store channels in any of the 9 different SQV memory banks. Also, you can store the same channel in multiple memory banks. Once you have added a channel to an SQV memory, when tuned to the channel "SQV" (and the memory bank number) will appear under the channel number on the TV screen.

Adding SQV Channels

1. Select the channel using the "Channel" option box or CH ▲ or ▼ button.
2. Highlight the bank (SQV1-SQV9).
3. Press ENTer to check mark the selected SQV memory bank.
4.Repeat for additional channels or banks.

Removing SQV Channels

1. Highlight the box for the SQV bank number.
2. Press ENTer to remove the check mark.

SQV (SuperQuickView™)
Using The Remote Control
Viewing and changing SQV banks using the remote control:

1. Press the SQV button.

2. To change memory banks, press a number button within 5 seconds of pressing the SQV button.

3. Press the SQV button repeatedly to cycle through the channels available in that bank.

Adding SQV channels using the remote control:

1. Use the CH ▲ or ▼ or number buttons to select the channel you want to add to the current SQV memory bank.

2. Press and hold the SQV button for about 2 seconds. When "SQV" and the memory bank number appear under the channel number, the channel has successfully been added.

Removing SQV channels using the remote control:

1. Press the SQV button and the memory bank number.

2. Press the SQV button repeatedly until you see the desired channel.

3. While the channel number and SQV indicator (with correct bank number) are still displayed on the screen, press the CANCEL button. If the CANCEL button is not pressed before the SQV indicator disappears automatically, the channel will not be removed.

3. When the SQV indicator disappears, the channel has successfully been removed only from that bank. Other banks remain unchanged.

Clock Menu: Auto or Manual Clock Setting

Clock Setting (Auto)
(Figure 1)

The Clock Setting (Auto) will automatically set the day and time using Extended Data Service (XDS) time data. This data is automatically retrieved from a PBS channel or other channel carrying this service when received on Ant-A or Ant-B. Some channels may send incorrect time information; this is not a defect in the TV.

Figure 1. Clock Menu (Auto)

Time Zone
(Figure 1)

When Auto has been selected for the Clock Setting, you need to select the correct time zone. Use ADJUST ▲ or ▼ to select the time zone (Atlantic, Eastern, Central, Mountain, Pacific, Alaska, or Hawaii) for your area. Then use ADJUST ▶ to move to the Daylight Savings Time option.

Set Time
(Figure 2)

When manual has been selected for the clock setting, you need to set the time. Press ▲ or ▼ to slowly adjust the time. Press and hold ▲ or ▼ to quickly adjust the time. Then use ▶ to move to the "Set Day" option.

Daylight Savings Time
(Figure 1)

When Auto has been selected for the Clock Setting, you need to select the Daylight Savings Time (DST) option that your state uses. Use Adjust ▲ or ▼ to select Applies if your state or area uses DST, or Ignore if your state or area does not use DST. The clock time and day will be set automatically after tuning to a channel carrying the Extended Data Service (XDS) time data (usually your local PBS channel).

Figure 2. Clock Menu (Manual)

Clock Setting (Manual)
(Figure 2)

For the manual clock setting, select the current time, including AM or PM and the day.

Set Day
(Figure 2)

When Manual has been selected for the Clock Setting, you need to select the current day of the week. Use ▲ or ▼ to select the correct day.

Captions Menu: Analog and Digital Captions

Figure 1. Captions menu

Captions Menu
Figure 1

On analog channels (Ant-A or Ant-B), broadcasters can send either Standard or Text closed captioning. Standard Closed Captions follow the dialogue of the characters on-screen and display in a small section of the screen. Text Closed Captions often contain information such as weather or news and covers a large portion of the screen. On digital channels (Ant-DTV) broadcasters can send up to 6 different captioning selections. Each TV station may broadcast only one or two types of captions or none at all.

Analog Captions
The TV can display one of the following captions for Analog sources:

- **CC1, CC2, CC3, or CC4** (Standard closed captioning signals).
- **Text1, Text2, Text3, or Text4** (Text closed captioning signals).
- **On if mute.** Closed captions when mute. When selected, the standard closed captioning signal (CC1) will turn on/off by pressing the MUTE button on the TV remote control.
- **Off.** No closed captions.

IMPORTANT

When analog Text closed captioning is selected, a large black or gray box appears on your TV screen if no signal is broadcast.

Background
To make the analog closed captions easier to read, you can choose to display the background color as either black or gray behind the captions. If you use Closed Captions frequently, Mitsubishi recommends gray for the background to prevent uneven aging of the picture tubes.

Note: See page **70** for information concerning uneven aging of picture tubes.

Digital Captions
The TV can display one of the following Captions for Digital sources:

- **Captions 1-6**
- **On if Mute** Closed captions when mute. When selected, the captioning signal (Caption 1) will turn on/off by pressing the MUTE button on the TV remote control.
- **Off** - No closed captions.

Digital Settings
Closed Captions provider selects Default options when sending digital closed captions. You may, however, select Custom option to customize the appearance.

Digital Channel Guide
(Figure 1)

Select ON to display the Digital Channel Guide automatically when changing channels and while viewing Ant-DTV. The Digital Channel Guide lists the channel and sub-channels, channel name and program title. The information is provided by the broadcaster, hence, it may not be available for all channels.

IMPORTANT

The content of captions is determined by the broadcaster. If your captions show strange characters, misspellings, or odd grammar, it is not a malfunction of the TV.

Captions Menu: Digital Captions Settings

Appearance
(Figure 1)

Closed Captions provider selects the Default options when sending digital closed captions. You may, however, select the Custom option to override and customize Closed Captions appearance.

Fonts
You can customize the text of digital captions by selecting the font of your choice. The available Font options are as follows:

- Default - Selected by the Closed Captions provider
- Font 1 - Monospaced font with Serifs
- Font 2 - Proportional spaced font with Serifs
- Font 3 - Monospaced font without Serifs
- Font 4 - Proportionally spaced without Serif
- Font 5 - Casual font
- Font 6 - Cursive font
- Font 7 - Small Capitals font

Size
You can also customize the text of digital captions by selecting your desired size of font. Large is the recommended font size.

Color
You can customize the text of digital captions by selecting the color of font. The available font colors are as follows:

• White	• Yellow
• Black	• Green
• Magenta	• Cyan
• Red	• Blue

Background
To make the digital closed captions easier to read, you can choose the background color. The available background colors are as follows:

• White	• Yellow
• Black	• Green
• Magenta	• Cyan
• Red	• Blue
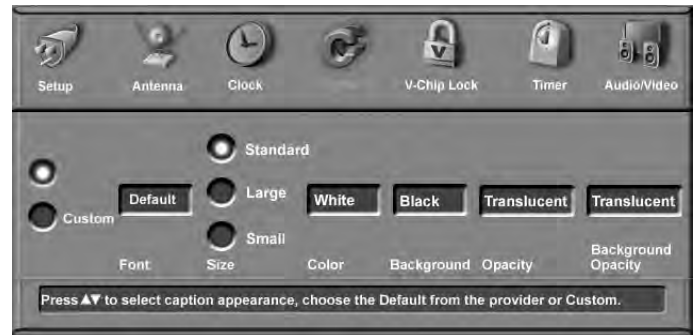
Figure 1. Digital Settings Menu

Opacity
You can customize the visibility of your fonts using the following categories:

- Transparent - See-through text to the TV program
- Translucent - TV program is visible behind the text
- Opaque - Solid color text; blocks the TV program
- Flashing - Text flashing in intervals

Background Opacity
You can customize the background for digital captions using the following categories:

- Transparent - See-through background to the TV program
- Translucent - TV program is visible behind the background
- Opaque - Solid background; blocks TV program
- Flashing - Background flashing in intervals

> **NOTE: If you choose transparent fonts and transparent background, no Closed Captions will be visible.**

> **IMPORTANT**
>
> **We recommend you use contrasting colors between captions and background. In particular, Black background and White font are ideal.**
>
> **Care must be exercised when selecting customized colors; your choice affect the legibility or readability of captions.**
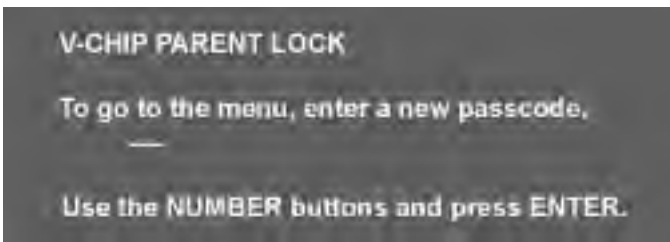
Figure 1. V-Chip Entry Screen
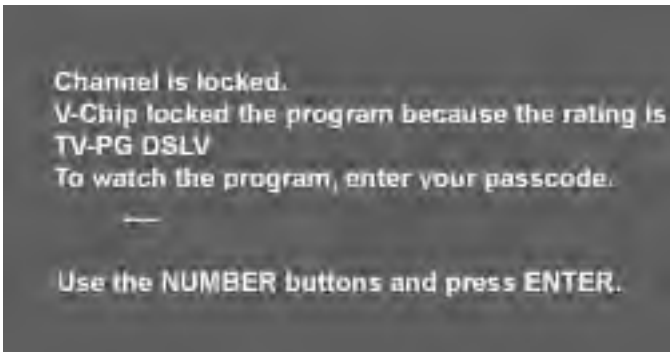
Figure 2. V-Chip Blocked Channel passcode screen

Figure 3. V-Chip menu

V-Chip
(Figure 3)

V-Chip allows you to Block or Allow programs based upon rating signals sent by the broadcasting station. The TV comes from the factory with the V-CHIP in the Off setting. You can turn the V-Chip on within the V-Chip Menu or you can use the V-CHIP button on the remote control to conveniently turn the V-CHIP on or off. The factory preset is TV-PG for TV ratings or PG for movie ratings, allowing only programs rated TV-PG/PG or lower. You can change the blocking level to various TV ratings and lettered categories or movie ratings. After changing channels or devices, there may be up to a 5 second delay before the V-Chip lock takes effect.

V-Chip Lock Menu: Passcode
Entry
(Figure 1)

You will see the screen shown in Figure 1 when you press the V-CHIP button on the Remote Control, or the first time you select V-Chip Lock from the MAIN menu, or after you have canceled your passcode.

After setting a passcode, the next time you select V-Chip Lock from the MAIN menu or V-CHIP button, you will see "a new" replaced by "your." Use the number buttons on the remote control to input a four-digit passcode, then press ENTer. You can delete a number and move back one space by pressing CANCEL. You can exit without inputting a passcode by pressing MENU or HOME.

Passcode Screen
(Figure 2)

To view a V-Chip blocked program or to watch the program during a scheduled lock time, you must enter your 4-digit passcode or change the channel to an unlocked program. Once you have entered the passcode, the V-Chip block or Lock by Time will remain released until the TV is powered off and then on again.

V-Chip Start Time and V-Chip Stop Time
(Figure 3)

Select the times you would like the V-Chip to be Active. By setting the V-Chip Start Time and V-Chip Stop Time to the same time, the V-Chip will be active 24 hours a day.

Press ▲ or ▼ to slowly adjust the time. Press and hold ▲ or ▼ to quickly adjust the time.

IMPORTANT

If you forget your four-digit Passcode, see Appendix A.

V-Chip Lock Menu: V-Chip Definitions

V-Chip Signal Information

When provided by the broadcaster, V-Chip ratings can be used to control which programs can be viewed or will be blocked. When V-Chip ratings are sent, you will see the ratings when you change the channel or when you press the INFO button on the remote control.

The V-Chip ratings information can be divided into two classifications, TV Ratings that include Content Categories and Movie Ratings. These are explained below.

TV Ratings:

Used with TV programs and made for TV movies.

TV-Y   Youth, designed for children under the age of 7.
TV-Y7   Youth, 7 years old and older. Designed for children 7 years old and older.
TV-G   General Audience. Designed for the entire family to view.
TV-PG Parental Guidance. Parental Guidance is recommended, may not be suitable for some children.
TV-14   Adolescent 14 years old and older. Not recommended for children under the age of 14.
TV-MA Mature Audience. Recommend for adults only.

Content Categories:

Used in association with the TV ratings above.

FV   Fantasy Violence- applies to TV-Y7 only.
D   Sexual Dialog- applies in different degrees to TV-PG and TV-14.
L   Adult Language- applies in different degrees to TV-PG, TV-14, and TV-MA.
S   Sexual Situations- applies in different degrees to TV-PG, TV-14, and TV-MA.
V   Violence (graphic or realistic)- applies in different degrees to TV-PG, TV-14, and TV-MA

TV Rating	FV	D	L	S	V
TV-Y					
TV-Y7	X				
TV-G					
TV-PG		X	X	X	X
TV-14		X	X	X	X
TV-MA			X	X	X

Movie Ratings:

Used with theater released movies and direct-to-video movies.

G   General Audience- Designed for the entire family to view.
PG   Parental Guidance- Parental Guidance is recommended, may not be suitable for some children.
PG-13 Parental Guidance 13 years old and older- Not recommended for children under the age of 13.
R   Restricted- Restricted in the theater to 17 years old and older unless accompanied by an adult.
NC-17 No Children- Restricted in a theater to 18 years old and older.
X   Adult- Designed for and restricted in the theater to adult audiences only. Contains explicit sexual content.

IMPORTANT: If you select to block programs that carry the V-Chip rating "Programs Not Rated", you may block news or emergency bulletins. Care should be used when blocking not rated programming.

When you select a TV or Movie rating, you are selecting the highest level of program that will be allowed to be viewed. As an example, if you select TV-PG, you are allowing programs rated TV-Y, TV-Y7, TV-G and TV-PG to be seen and blocking programs rated TV-14 and TV-MA. If you select a movie rating of PG-13, you are allowing movies rated G, PG and PG-13 to be seen and blocking movies rated R, NC-17 and X. When you select a TV Content category, you will block all TV programs that have the same content category listing. As an example, if you select to block V (Violence) at the TV-14 level, you will also block any program that has the V category listing at the TV-PG rating level.

IMPORTANT: V-Chip is effective for programs viewed on Ant-A and Ant-B, for devices connected to Inputs 1-5 for programs viewed on Ant-DTV and IEEE 1394 devices. It is not applicable for devices connected to Component 1 and 2, and Inp-DTV.

IMPORTANT: Videotapes, laser discs, and DVD's may not contain V-Chip rating signals, in this case V-Chip cannot block the program or movie.

IMPORTANT: Broadcasters are not currently required to include V-Chip rating signals at this time. If the broadcaster does not include the V-Chip rating signal, V-Chip cannot block the program.

V-Chip Menu: Lock By Time and Front Button Lock

Lock By Time
(Figure 1)

LOCK BY TIME will allow you to lock the entire TV during specific hours.

Use ADJUST ▲ or ▼ to select ON or OFF then use ADJUST ▶ to move to the "Lock Time" option box.

Lock by Time, Lock Time, and Unlock Time
(Figure 1)

Lock by Time locks the entire TV based upon the Lock Time and Unlock Time. You must input your 4-digit passcode to use the TV when it is locked. By setting the Lock Time and Unlock Time to the same time, the Lock by Time will be active 24 hours a day.

1. Use ADJUST ◀ or ▶ to select Lock Time.

2. Use ADJUST ▲ or ▼ to select the time the lock will start.

3. Then use ADJUST ▶ to move to the Unlock Time option box.

4. Use ADJUST ▲ or ▼ to select the time the lock will stop.

Front Button Lock
(Figure 2)

Front Button Lock lets you disable controls on the front panel to prevent young children from changing settings by accident.

Select ON to lock out the operations of the front panel button and select OFF to restore the operations of the front panel buttons.

If the front panel buttons have been locked and you misplace the remote control, you can restore the function of the front panel buttons by pressing and holding the MENU button on the front panel for more than 8 seconds. If the TV is already on, a message will be displayed to confirm the release of the Front Button Lock.

Figure 1. Lock by Time menu

Figure 2. V-Chip Lock menu

Timer Menu: Setting The Timer

Figure 1. Timer menu

IMPORTANT

The TV's clock must be set before you can set the timer. If you have not set the clock, you will see the CLOCK menu instead of the TIMER menu.

Timer On/Off
(Figure 1)

The timer can be turned On or Off. When On, you need to select the time to turn On, the day to turn On, the device and the channel to display. At your preselected time, the timer will turn the TV On, and a message will be displayed, "Press a key for the TV to stay on". Any button on the remote control must be pressed within 5 minutes, or the TV will turn itself Off.

Set Time
Select the hour and minute, including AM or PM, when the TV is to turn on. Press ▲ or ▼ to slowly adjust the time. Press and hold ▲ or ▼ to quickly adjust the time.

Set Day
Select the day or days that the TV will turn on automatically. Press ADJUST ▲ or ▼ to select Everyday, Mon-Fri (Monday through Friday), or the individual days of the week.

Device
Press ADJUST ▲ or ▼ to select the device to use when the timer turns on the TV. If the TV is already on, the timer will turn the TV to this selected device.

Channel
When Ant-A, Ant-B, or Ant-DTV is the selected device, you may select any memorized channel. Press ADJUST ▲ or ▼ to select the channel and the TV will tune to this channel in memory when the timer turns it on. This includes sub-channels for Ant-DTV.

A/V Settings Menu: A/V Memory Reset, Video Mute, Black Enhancement, and Audio/Video Settings

A/V Memory Reset

A/V Memory Reset allows you to select the device which will have the A/V Settings returned to the original factory settings. To return a device's memory to the original factory settings, select the device and then press ENTer.

Audio/Video Settings
(Figure 1)

Each device has its own A/V memory. Select the device in A/V Memory Reset then select Audio or Video to adjust the device's individual settings. Press ENTer, and the menu is removed and the individual settings are displayed.

Use ADJUST ▲ or ▼ to select the individual settings to be adjusted. Use ADJUST ◄ or ► to make the adjustment. For descriptions of the individual A/V settings see *A/V Setting Descriptions, page 56-58.*
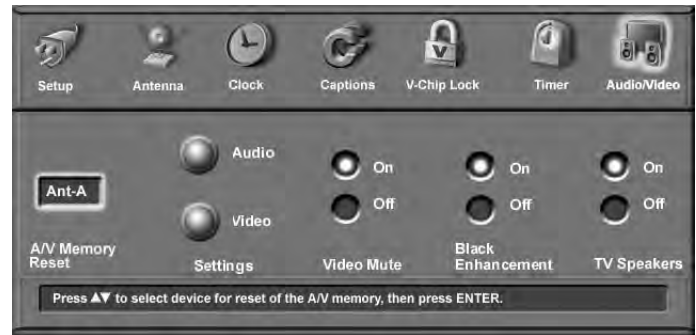
Video Mute
(Figure 1)

Video Mute lets you display a blue background when no signal is being received on Inputs 1-5.

Black Enhancement
(Figure 1)

The contrast in dark scenes is enhanced for better picture quality. Brighter scenes will not be affected.

Using the AUDIO and VIDEO Buttons on the Remote Control
(Figure 2)

You may adjust Audio or Video setting directly without using the TV Main menu.

    1. Press AUDIO or VIDEO button to cycle through the available settings.

    2. Press ◄ or ► to adjust the setting. After 5 seconds of inactivity, the setting display will disappear.

Figure 1. Audio/Video menu

Figure 2. The AUDIO, VIDEO, and ADJUST buttons.

A/V Settings Menu: TV Speakers

TV Speakers
(Figure 1)

This selection will turn on or off the TV's internal speakers. You may select Off when sending the sound through a separate stereo system or surround sound A/V receiver.

When NetCommand™ is enabled, selecting the A/V Receiver icon from the Device Selection menu automatically turns Off the TV speakers. See the NetCommand™ Guide for further instructions.

Figure 1. Audio/Video Settings menu

IMPORTANT

To prevent damage from a sudden increase in volume, make sure the TV volume is set to low before choosing ON.

A/V Setting Descriptions: Audio

Audio Settings

Bass enhances or reduces low-pitch sound.

Treble enhances or reduces high-pitch sound.

Balance adjusts the level of sound between the left and right speakers.

Surround creates simulated stereo and surround effects through the TV speakers.
Your choices are:

- **Off**: No surround effects.

- **Surround Sound**: Your TV will create a simulated surround effect when watching a stereo program.

- **Simulated Stereo**: Your TV will create a simulated stereo effect when watching a non-stereo program.

Listen to (for **Ant-A** and **Ant-B**) determine how your TV will receive a broadcast audio signal and play back the sound you hear.

Your choices are:

- **Stereo**: Default setting. The TV will play stereo broadcasts in stereo and mono broadcasts in mono. The word "Stereo" will be displayed when you tune to a channel broadcasting stereo.

- **SAP (Second Audio Program)**: Additional monaural soundtrack that you cannot hear during normal TV viewing. The SAP signal might be related to the program you are watching, such as a soundtrack in a foreign language, or unrelated to the program you are watching, such as a weather report. If a SAP signal is broadcast, the letters "SAP" will be displayed when you tune to the channel.

- **Mono**: Reduces background noise, and should be used when receiving a weak stereo audio signal. All audio will be played mono with this setting.

Listen to (for **Ant-DTV** and **IEEE 1394 devices**) Determines what possible language you will hear. Your choices are:

- English
- French
- German
- Italian
- Portuguese
- Spanish
- Other

Listen to is not available for devices connected to the TV INPUTS.

Level Sound (for **Ant-A** and **Ant-B** and **analog devices**) automatically equalizes the volume level of programs containing significant level differences from one segment to another (for example, regular programming to commercials). To receive the best fidelity with music programs, you can turn this setting to Off.

Level Sound (for **Ant-DTV** and **IEEE 1394 devices**) automatically reduces loud passages and boosts soft passages to a more uniform loudness. When connecting to an A/V Receiver, set level sound to OFF and turn the TV speakers off to send full dynamics to the A/V Receiver.

This feature depends on the type of digital audio being received. Some digital audio formats, such as MPEG do not offer this dynamic range control. In these cases, no effect will be heard when changing the level sound setting.

A/V Setting Descriptions: Video

Video Settings

• **Contrast** provides a slider to adjust the white-to-black level. Low contrast shows a variety of shades in darker images, while high contrast shows darker images more uniformly black and makes colors appear more vibrant.

• **Brightness** provides a slider to adjust the overall brightness of the picture.

• **Sharpness** provides a slider to adjust the detail and clarity.

• **Color** provides a slider to adjust the color intensity.

• **Tint** provides a slider to adjust the proportion of red to green.

• **Color Temp** (Color Temperature) allows you to adjust how white images are displayed. Your choices are:

  — **Low 6500K** or **Low** (for DTV): White images will have a warm cast to them. This adjustment is an average and can vary due to ambient room lighting, video scene brightness and the TV's age. The Low 6500K represents the 6500K industry standard for NTSC (non-DTV) pictures.

  —**Medium**: White images will be balanced between the Low (warm) and High (cool) settings.

  —**High**: White images will have a cool cast to them. This setting may provide the most realistic picture under bright lighting.

• **Video Noise** use reduction to reduce minor noise (graininess) in the broadcast received on Ant-A and Ant-B or Inputs 1-5 and Component 1 and 2. Use standard with good quality signals.

• **Image Type** maximizes the original camera media: Video or Film. Video media uses a video camera and is created at 30 frames per second. Film media uses a film camera and is created at 24 frames per second. Examples of Video media are live TV broadcast such as news, special events, or video taped programs. Examples of film media are motion pictures, made-for-TV movies, and many prime time programs. Filmed media is converted by the broadcaster or home video company to 30 frames per second to match TV or video standards. This conversion can leave subtle picture artifacts or conversion errors. Setting the Image Type to Film can reduce the picture artifacts and improve the picture quality, when viewing a movie from a 480i device such as a VCR, standard DVD or antenna.

Image Type is not effective for progressive scan (480p) devices, and high definition signals.

• **Velocity Scanning Modulation (VSM) Sharpness** When turned On, selected image outlines are emphasized, resulting in sharper images. The default is On. When turned Off, the velocity scanning modulation function is prevented.

In This Section . . .

4

CHAPTER FOUR

Remote Control Functions: Overview

Overview
(Following page, figure 1)

1. **Slide Switch**: Select A/V product to be controlled by the remote control.

2. **Numbers**: Individually select channels or enter information into menus.

3. **POWER**: Turns power on and off for TV and other A/V products.

4. **SQV (SuperQuickView™)**: Scan through memorized lists of favorite channels.

5. **QV (QuickView™)**: Switch between the current channel and last channel viewed.

6. **GUIDE**: Display program guide for satellite receiver, some cable boxes, or DVD Disc menu. Display Digital Channel Guide for Ant-DTV and other digital devices. Display Track List for AV Disc.

7. **DEVICE**: Displays the Device Selection menu to select the device to view (Ant-A, Ant-B, Ant-DTV, devices connected to the TV's inputs, or IEEE 1394 devices).

8. **CHANNEL**: Scroll up or down through memorized channels.

9. **VOLUME**: Change sound level. Volume on-screen displays are separate for analog devices and digital devices.

10. **MUTE**: Turn sound on or off.

11. **MENU**: Display ▶ViewPoint® on-screen menu system.

12. **HOME**: Exit TV on-screen menus and return to TV viewing.

13. **ENT**: (Enter) Select a channel number or menu item.

14. **ADJUST**: Navigate menus, change settings, and move the PIP on-screen location. Also operates many NetCommand™ functions. See the NetCommand™ Guide for details.

15. **DEVICE MENU**: Display menus for devices connected to TV. See the NetCommand™ Guide for details.

16. **CANCEL/SUB**: Clear SQV and some menu entries. Add separator between major and minor Ant-DTV channels.

17. **V-CHIP**: Turns On or Off the V-Chip Lock.

18. **INFO**: Display on-screen summary of the current device used and any broadcast information available (including current V-Chip information). See Appendix H for details.

19. **AUDIO**: Select the audio settings.

20. **VIDEO**: Select the video settings.

21. **PIP CH**: Scroll up or down through memorized channels for PIP or POP.

22. **PIP/POP**: Cycle through PIP and POP display choices.

23. **EXCH**: Exchange PIP or POP and main TV picture.

24. **SLEEP**: Set the TV to turn off within 2 hours. See *Sleep Timer* for setup instructions.

25. **PIP DEVICE**: Displays PIP Selection menu to select the PIP or POP device source.

26. **FORMAT**: Change the shape and size of the main TV picture.

27. **CONNECT**: Initiate IEEE 1394 peer-to-peer connections.

28. **REC**: Record with your VCR, setup recordings for DVCR or IEEE 1394 devices. See the NetCommand™ Guide for details.

29. **PAUSE**: Pause your VCR, DVD, AV Disc, or freeze the PIP or POP image. See the NetCommand™ Guide for details.

30. **REW/REV**: Rewind or reverse search with your VCR, reverse scan with your DVD or AV Disc. See the NetCommand™ Guide for details.

31. **PLAY**: Play your VCR, DVD, or AV Disc. See the NetCommand™ Guide for details.

32. **STOP**: Stop your VCR, DVD, or AV Disc. See the NetCommand™ Guide for details.

33. **FF/FWD**: Fast forward or forward search with your VCR, fast play with your DVD. See the NetCommand™ Guide for details.

34. **Illuminate:** Illuminates buttons or labels on the Remote Control. Located on the right side of the Remote Control.

Remote Control Functions: Care and Operation

Figure 1. The remote control functions.

Operation

Installing the Batteries:
(Figure 2)

> **1.** Remove the remote control's back cover by gently pressing the ribbed tab in the direction of the arrow and sliding off the cover.

> **2.** Load the batteries, making sure the polarities (+) and (-) are correct.

For Best Results from the Remote Control:

- Be within 20 feet of the equipment.

- Do not press two or more buttons at the same time unless instructed.

- Do not allow unit to get wet or become heated.

- Avoid dropping on hard surfaces.

- Do not use harsh chemicals to clean. Use only a soft, lightly moistened cloth.

- Do not mix new and old batteries.

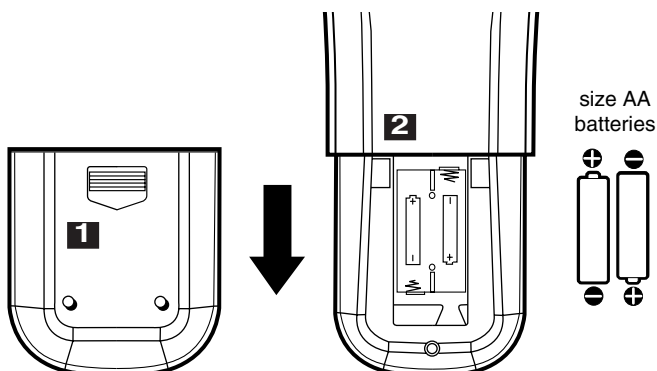- Do not heat, take apart, or throw batteries into fire.

- Use only AA batteries.

Figure 2. Installing the batteries.

Channel Selection

For Ant-A or Ant-B Channels: You have three options...

• Enter three numbers (for channel 2, press 002).

• Press the channel number and ENTer (for channel 2, press 2, then ENTer).

• Enter the channel number and wait four seconds. The TV will change automatically.

For Ant-DTV Channels
(When Ant-DTV is the current device):

1. Enter two or three numbers for the major channel number. If three numbers are pressed, the separator is automatically added and you may proceed to step 2. If two numbers are pressed, you must add the separator by pressing the SUB button on the remote control.

2. Enter a 1-digit sub-channel number and wait four seconds. Enter a 1-digit sub-channel number and press ENTer. Or enter 2 digits for this sub-channel and the TV will automatically switch channels.

Sleep Timer

Setting the Sleep Timer:

1. Press SLEEP on the remote control.

Note: A message indicating the length of time the sleep timer is to be set for is displayed on the TV screen.

2. Each press of SLEEP increases the time displayed by 30 minutes, until the maximum value of 120 minutes is reached.

3. After 5 seconds of inactivity, the message will disappear.

4. Press SLEEP to view the remaining time before the timer turns the TV off.

Canceling the Sleep Timer:

1. Press SLEEP to display the on-screen message.

2. Press SLEEP repeatedly until OFF is displayed.

Remote Control Functions: Operation of PIP and POP

Picture-In-Picture (PIP) and Picture-Outside-Picture (POP) features allow you to view programming in different ways. While watching the main screen, you can display programs from other channels and other inputs. You can display a single PIP, side-by-side pictures, three POPs, or nine POPs.

Activating the PIP and POP

Figures 1-5 on following page

Press PIP/POP to activate the PIP/POP option. With each press of the PIP/POP button on the TV remote control (within 3 seconds of each other), the PIP/POP will cycle through the following display options.

• **POP**: side-by-side pictures
• **3 POP**
• **9 POP**
• **PIP**
• **PIP/POP:** off

To turn PIP/POP off, wait at least 10 seconds, and press
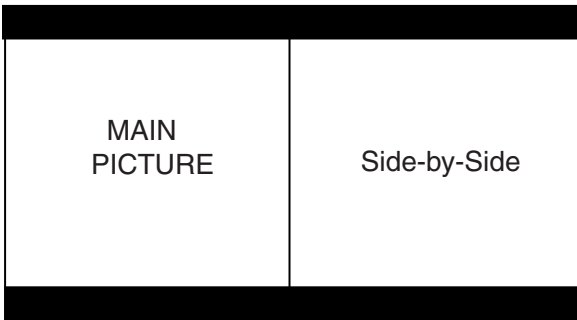PIP/POP.

Remote Control Functions: Operation of PIP and POP

MAIN PICTURE	Side-by-Side

Figure 1

MAIN PICTURE	P1
	P2
	P3

Figure 2

. MAIN PICTURE	P1	P2	P3
	P4	P5	P6
	P7	P8	P9

Figure 3

```
Ant-A 002 KCBS                               PIP A 017
Standard
Stereo SAP
TV-PG DLSV
SQV1
```

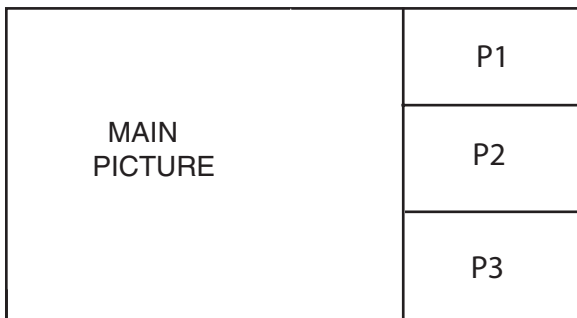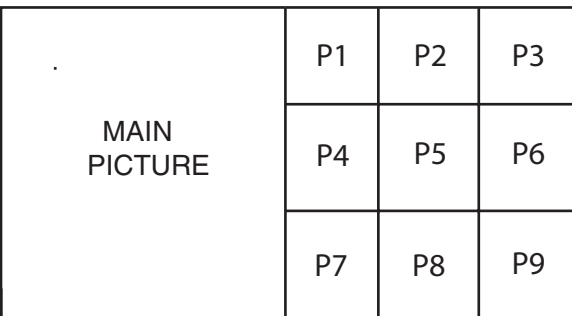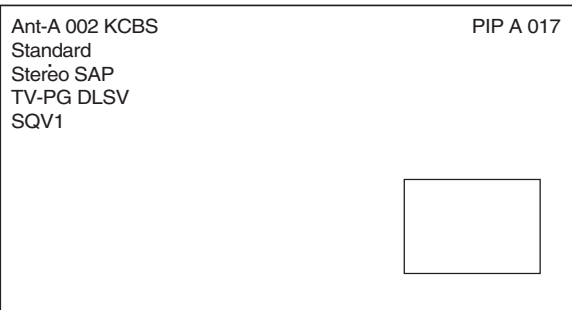*Figure 4*

Changing PIP/POP Device
Press PIP DEVICE to change the PIP or POP picture source device. A menu similar to the Device Selection menu will be displayed.

Changing PIP/Side-by-Side Channels
Press PIP CH to scroll up and down through memorized channels on Ant-A and Ant-B.

Exchanging Program Images
Press EXCH to exchange the main picture and the PIP/POP picture.

Moving PIP Image
If no menus are on the screen, press ADJUST ▲ ▼ ◀▶ to move the PIP display anywhere on the main screen.

Automatic POP Switching
When automatic POP switching is active, the TV will cycle through memorized channels on Ant-A or Ant-B or strobe pictures from other A/V components in the POP display. Press PAUSE to pause or restart automatic POP switching.

Selecting POP "Live" Image
Press ADJUST ▲ ▼ ◀▶ to select a different POP "live" image (automatic POP switching must be paused.)

Freeze the PIP and Side-By-Side Picture
Press PAUSE to freeze the PIP and side-by-side images. Press PAUSE again to return to a "live" image.

IMPORTANT

- **Side-by-Side cannot show the same channel or device on both sides.**
- **ANT-B is not available as the PIP or Side-by-Side while ANT-A is the main image.**
- **PIP/POP is compatible with 480i signals. PIP/POP is not compatible with 480p, 1080i signals or signals from ANT-DTV, IEEE 1394 devices or VGA input.**

Remote Control Functions:

This is a wide screen TV (also known as a 16:9 TV). This shape reflects the new types of images available from HDTV and many DVDs. There are still many older style narrow screen images (called 4:3 aspect ratio) you will encounter. While there will never be a perfect solution for displaying a narrow image on a wide screen, Mitsubishi offers several display formats to choose from.

Press FORMAT on the TV remote control to cycle through the available display formats.

Last used format for each device will be used when you return to that device.

Note: Not all formats are available for PIP/POP.

PIP/POP Formats			
	Standard	Expand	Narrow
PIP	X	X	X
Side by Side	X	X	
3 POP	X		
9 POP	X		

Definitions:

Anamorphic - (also listed as "Enhanced for Widescreen TVs) These DVDs are recorded in a special way to properly show high-resolution images on 16:9 TV sets in the standard mode.
Non-Anamorphic (also listed as 4:3, 1:33:1, Letterbox or Full Screen) These DVDs are recorded for use with traditional shaped TVs. They may be full screen (on 4:3 or 1:33:1) which crops movies to fit the narrow TV, or Letterboxed which adds black top and bottom bars.

This information may or may not be listed on the DVD case. Some DVDs support both types of recordings.

> **Caution should be observed when using the Narrow format due to the stationary gray side bars. Please see guidelines concerning stationary images, page 70.**

 • **Standard**: This is the full screen format. HDTV signals will automatically use this format. This format is also useful to display Anamorphic DVDs that have 1.78:1 or 1.85:1 aspect ratios. Anamorphic DVDs that have the 2.35:1 aspect ratio will still display black bars at the top and bottom, but will show the entire image correctly. Narrow (4:3) images will be stretched evenly from side to side. Available for all signals.

 • **Expand**: This will enlarge the picture to fill the screen, cropping off some of the image at the top and bottom. This is useful to reduce the letterbox top and bottom bars of non-anamorphic DVDs or to correct narrow (4:3) images that have been stretched in the Standard format. Available for 480i and digital SD 4:3 signals only.

 • **Zoom:** This will enlarge the picture, cropping off some of the image at each side and top and bottom. This is useful to remove or reduce the black top and bottom bars on anamorphic DVDs with a 2.35:1 aspect ratio. Available for 480i signals only.

 • **Stretched**: This format will stretch a narrow (4:3) image across the screen, however, there is less stretch in the center than the sides. This will allow the entire narrow image to be displayed across the screen with less distortion than seen in the Standard format. Available for 480i signals only.

 • **Narrow:** This format will display narrow (4:3) images in their original shape, and add stationary gray side bars to fill the screen. Available for 480i, 480p and digital standard 4:3 signals only.

NON-ANAMORPHIC PICTURES
(TRADITIONAL 4:3 PICTURES)

Standard (Not Recommended)

Expand (Recommended for Letterbox)

Zoom (Not Recommended)

Stretched (Recommended for Standard Broadcast)

Narrow (Recommended for Occasional Use)

ANAMORPHIC WIDESCREEN PICTURES
(DVDs ENHANCED FOR WIDE SCREEN TV - 16:9)

Standard (Recommended)

Expand (Not Recommended)

Zoom (Recommended for 2.35:1 DVDs)

Stretched (Not Recommended)

Narrow (Not Recommended)

Programming the Remote Control to Control NetCommand™ A/V Products

To Program the Remote to Control NetCommand™ A/V Products:

(See *NetCommand Supported Devices*, **for the list of A/V products supported by the NetCommand™ System.)**

> **1.** Move the slide switch at the top of the remote to the TV layer.
>
> **2.** Press and hold the POWER button on the remote control.
>
> **3.** Enter the three digit code of 935, and then release the POWER button on the remote control.
>
> **4.** The remote control is now programmed to send NetCommand™ signals to the TV so the TV can control the IEEE 1394 devices and selected older NetCommand™ supported IR devices. See the NetCommand™ guide for details.

NetCommand™	CODE to ENTER
TV Control and NetCommand™ Devices:	**935**

Figure 1. Programming the TV remote to control your NetCommand™ A/V devices.

Programming the Remote Control to Control Non-NetCommand™ AV Products

To Program the Remote to Control Other Brands of Audio and Video Products:

(Figures 1-5)

1. Move the slide switch at the top of the remote to the product you want to control.

2. Press and hold the POWER button on the remote control.

3. Enter the first three digit code listed for your equipment, and then release the POWER button on the remote control.

4. Point the remote control at the equipment and press the POWER button. If the equipment responds, the remote control is properly programmed to operate the equipment. If the equipment does not respond, repeat steps 2-4 with the next three digit code listed in step 3 for your equipment.

Satellite Receiver Codes

Satellite brand	Code to enter:	
Mitsubishi DTV - DBS	006	If your satellite receiver code is not listed here, please see page 74 for a complete listing.
(Echostar)Dishnetwork	175	
Hughes - DBS	173	
RCA - DBS	176	
Sony - DBS	177	
Toshiba - DBS	173	
Panasonic - DBS	174	

To reset to default code, enter 000

Figure 2. Programming the remote to control your satellite receiver.

VCR Codes

VCR brand	Code to enter:	
Mitsubishi	001, 002	If your VCR code is not listed here, please see page 74 for a complete listing.
Hitachi	020, 043, 065	
JVC	030, 054, 059	
Phillips / Magnivox	043, 044, 051	
Panasonic	041, 042, 043	
RCA	020, 053, 065	
Sony	048, 049, 050	
Toshiba	021, 066	

To reset to default code, enter 000

Figure 3. Programming the remote to control your VCR.

Cable Box Codes

Cable box brand	Code to enter:	
General Instruments/ Jerrold/Motorola	111, 119, 120, 121, 122, 123, 124, 125, 126, 127	If your cable box code is not listed here, please see page 74 for a complete listing.
Oak	102, 137, 139	
Pioneer	101, 116	
Scientific Atlanta	111, 112, 113	
Zenith	100, 117	

To reset to default code, enter 000

Figure 1. Programming the remote to control your cable box.

IMPORTANT

If you cannot turn the cable box ON by pressing POWER, try pressing CHANNEL or the number buttons.

Programming the Remote Control to Control Non-NetCommand™ A/V Products

Figure 4. Programming the remote to control your DVD/ LDP.

Figure 5. Programming the remote to control your A/V receiver.

After entering the correct codes in each position of the remote control, use the slide switch to select which product will respond when an operational button is pressed. If the TV position has not been programmed to control NetCommand™ and you enter a code from the A/V Receiver chart while the slide switch is set to TV, the volume and mute functions change to match the A/V receiver. This is useful when using an A/V receiver with the TV all the time. In all other cases, only one of the below devices is allowed for each slide switch position.

TV position (when the remote has not been programmed to operate NetCommand™):
- TV
- A/V receiver (volume and mute only)

Cable/DBS/DTV position:
- Cable box
- Satellite receiver
- DTV receiver

VCR position:
- VCR
- DVD
- LD Player

DVD position:
- DVD
- LD Player
- Cable box
- VCR

Audio position:
- A/V receiver
- Cable box
- Mitsubishi CD player [If you have a Mitsubishi A/V receiver, the audio position may be used in conjunction with selected Mitsubishi CD players. Your audio position must be programmed to 010].

IMPORTANT

If the remote control has not been programmed to operate NetCommand™ and slide switch is set to TV when you enter an A/V receiver code, VOLUME and MUTE will control the A/V receiver rather than the TV. To return volume and mute control to the TV, set the slide switch to TV, press and hold POWER and enter 000.

IMPORTANT

Some manufacturers may change their products, or they may use more than one remote control system. If this is the case, your remote control may not be able to operate your VCR, DVD, cable box, satellite receiver, or A/V receiver.

Remote Control Functions: Special Functions

When your remote control has been Programmed to operate another manufacturer's product, the function performed on each layer can vary. The most common functions are:

VCR			
•POWER	•PLAY	•PAUSE	•FF/FWD
•CHANNEL up/down	•REC	•STOP	•REW/REV
•Mitsubishi VCRs will be compatible with additional buttons			

Cable Boxes and Satellite Receivers
- •POWER
- •CHANNEL up/down
- •0-9 Number Buttons (on some models)
- •ENTER (on some models)
- •CANCEL (on some models)
- •ADJUST up/down/left/right (on some models)
- •GUIDE (on some models)

A/V Receivers
- •POWER
- •VOLUME
- •MUTE

Mitsubishi A/V Receivers
- •Direct Input Selection Buttons -use number buttons, SQV, and QV (on some models)

Mitsubishi CD Players (not all functions for all models)
- •PLAY
- •FF/FWD
- •REW/REV
- •PAUSE
- •STOP

DVD and Laser Disc Players (not all functions for all models)
- •POWER
- •PLAY
- •ARROW up/down/left/right (on some models)
- •PAUSE
- •CANCEL (on some models)
- •MENU
- •STOP
- •REW/REV
- •ENTER
- •0-9 Number Buttons (on some models)

Mitsubishi Satellite Receiver
- •POWER
- •GUIDE
- •0-9 Number Buttons
- •QV
- •SQV (FAV)
- •ENTER
- •CHANNEL up/down
- •INFO
- •HOME (EXIT)
- •ADJUST up/down/left/right
- •SUB (-)
- •MENU (ACTION)

IMPORTANT

The remote control may return to its initial setting when the batteries are changed. You may need to reprogram.

⚠ **IMPORTANT NOTES** ⚠

WARNING: **When using the VGA Input, do not leave stationary or letterbox images on-screen for extended periods of time. Mix types of pictures shown. Uneven picture tube aging is NOT covered by your warranty.**

The normal use of a TV should include a mixture of TV picture types. The most frequently used picture types should fill the screen with constantly moving images rather than stationary images or patterns. Displaying the same stationary patterns over extended periods of time, or displaying the same stationary pattern frequently can leave a subtle but permanent ghost image. To avoid this, mix your viewing pattern. Do not show the same stationary image for more than 15% of your total TV viewing in any one week. Display constantly moving and changing images that fill the screen whenever possible.

This projection TV uses picture tubes to project the image to the screen. **All picture tubes age with use.** As they age, their light output is gradually reduced. Normal TV pictures fill the screen with constantly changing images. Under these conditions, picture tubes age at an even rate across the entire screen. This maintains a TV picture that is evenly bright over the whole screen. Stationary images or images that only partially fill the screen (leaving black or colored bars to fill the screen), when used over extended periods of time or when viewed repeatedly, can cause uneven aging of the phosphors and leave subtle ghosts of the stationary images in the picture.

Still or stationary images may be received from broadcasters, cable channels, satellite channels, DVD discs, video tapes, laser discs, on-line services, web/internet searching devices, video games, and digital TV tuner/converter boxes. Examples of these types of images can be, but are not limited to the following:

➡ **Letterbox top/bottom black bars**: shown at the top and bottom of the TV screen when you watch a widescreen (16:9) movie on a standard (4:3) TV.

➡ **Side bar images**: solid bars shown on each side of an image when watching a standard (4:3) program on a widescreen (16:9) TV.

➡ **Stock-market report bars**: ticker running at the bottom of the TV screen.

➡ **Shopping channel logos & pricing displays**: bright graphics that are shown constantly or repeatedly in the same location.

➡ **Video game patterns and scoreboards**

➡ **Bright station logos**: moving or low-contrast graphics are less likely to cause uneven aging of the picture tubes.

➡ **On-line (Internet) web sites**: or any other stationary or repetitive computer style images.

➡ **Closed Caption Backgrounds:** When set to black or bright color, if Close Caption will be used frequently, Mitsubishi suggests the use of the gray background.

Lock Bypass Instructions Have Been Filed for Future Reference

Bypassing the V-Chip Lock

After you set the lock, you need your passcode to view a V-Chip locked program, view the locked TV, cancel the lock, or enter the V-Chip Lock menus.

If you forget your passcode, you can view the locked TV without entering your passcode. This is done by pressing the number 9 and QV buttons on the remote TV control at the same time, when your passcode is requested. This process temporarily unlocks the TV.

When entering the V-Chip Lock menu, this process deletes your old passcode and prompts you to enter a new passcode. Pressing HOME at this time will cancel the entire passcode.

Bypassing Front Button Lock

If you have misplaced the remote control, you can bypass the front button lock by pressing and holding the MENU button on the front panel for more than 8 seconds.

IMPORTANT

Cut along the dotted line and file bypass instructions in a safe place for future reference.

IMPORTANT

When changing or deleting your passcode, you must use the remote control included with this TV. You cannot use a Mitsubishi remote control from another component or a "universal" remote.

Component-1 and Component-2 Inputs

These inputs are compatible with component video signals from standard DVD players and other equipment sending a standard NTSC component video signal (480i). These inputs are also compatible with newer DVD players sending a progressive NTSC component video signal (480p).

VGA Input

This input will accommodate most computers capable of supporting a VGA monitor. The only compatible display resolution is 640x480. The sync rate is 60 Hz. SVGA and XVGA resolutions are not supported.

INP-DTV

This input is compatible with most standard DTV and satellite receivers with component video (YPbPr) outputs. Compatible DTV signals are SDTV 480i/480p, and HDTV 1080i. All other DTV signals, such as 720p, need to be converted by the DTV receiver to one of the compatible signal types. Please check the DTV receiver specifications before connecting.

This input is compatible with some DTV receivers using RGB with sync on green or with "separate H and V sync". Compatible DTV signals are SDTV 480i, 480p, and HDTV 1080i. All other DTV signals, such as 720p, need to be converted by the DTV receiver to one of the compatible signal types. Industry standards for DTV RGB signals (systems, synchronization, timing, and signal strengths) are not currently established. These inputs will not be compatible with all DTV receivers that offer RGB.

If your DTV receiver offers both DTV component video signals and DTV RGB signals, we suggest you use the DTV component video signals. Check the DTV receiver specifications before connecting.

Input Levels and Timing with Component Video

EIA - 770.1 and EIA - 770.2 Standard Levels & Timing

Y = 1.0Vp-p (includes sync) 75-Ohms

Pr = 700mVp-p, 75-Ohms (can also receive signals from outputs labeled R-Y and Cr)

Pb = 700mVp-p, 75-Ohms (can also receive signals from outputs labeled B-Y and Cb)

Input Levels and Timing When Used With HD Component Video Signals

EIA - 770.3 Standard Levels and Timing

Y = 1.0Vp-p (includes sync) 75-Ohms
Pr = 700mVp-p, 75-Ohms
Pb = 700mVp-p, 75-Ohms
H = Not Used
V = Not Used

Input Levels and Timing When Used With RGB Video Signals

G = 700mVp-p (no sync), 1Vp-p (with sync) 75-Ohms

R = 700mVp-p, 75-Ohms
B = 700mVp-p, 75-Ohms
H = 4Vp-p+/-1.0v, 75-Ohms (when using separate H and V sync)
V = 4Vp-p+/-1.0v, 75-Ohms (when using separate H and V sync)

NetCommand™ IEEE 1394 & HAVi System Compatibility

This television is designed to conform to IEEE 1394 AV/C and HAVi Software standards in effect at the time of development. This exciting new networking and control technology is designed to provide high-performance digital connections and product control, making products easier to use.

At the time of development, only one other product was available for compatibility testing - the Mitsubishi HD VCR, model HS-HD2000U. This D-VHS VCR is fully compatible with this TV.

As other manufacturers produce products that use IEEE 1394 AV/C and HAVi, they will be responsible for the development of their products to meet the standards of the technology, as well as compatibility testing with other products. Mitsubishi cannot be responsible for their efforts, and therefore cannot promise compatibility with these other products. Any compatibility problems with other manufacturers products should be brought to the attention of those manufacturers.

Remote Control Programming Codes

A/V Receivers

Mitsubishi	010, 011, 012, 013, 014, 015
Admiral	220
Aiwa	225, 226, 241
Denon	234, 235, 236
Fisher	204
Gerrard	213
Harman Kardon	215, 223, 242
Jensen	223, 229
JVC	232, 233
Kenwood	200, 208
Magnavox	227, 228
Marantz	224
Mclintosh	216
Nakamichi	206, 217
Onkyo	209, 214, 240
Optimus	203, 227, 231, 230
Panasonic	219, 218, 221
Philips	223
Pioneer	205, 207
Quasar	219, 218, 221
RCA	203, 205, 227, 231,230
Sansui	203, 211, 239
Sharp	234, 237
Sony	222
Sound-sigh	238
TEAC	212, 213, 210, 211
Technics	221, 218, 219
Victor	232, 233
Yamaha	201, 202

DVD Players

Mitsubishi	003
Aiwa	275
Apex	266
Denon	250, 273
Ferguson	251
Hitachi	270
JVC	257
Normande	251
Onkyo	267
Oritron	263, 268
Panasonic	250
Paite	262
Philips/Magnavox	258, 253, 272
Pioneer	252
RCA/Proscan	251, 256
Saba	251
Samsung	261
Sampo	263
Sanyo	276
Sharp	260
Silvania	264
SMC	276
Sony	254
Thompson	251
Toshiba	253
Yamaha	250, 272, 277
Vialta	278
Xwave	269
Zenith	259

Cable Box

ABC	124
Archer	132, 125
Cableview	105, 132
Citizen	122, 105
Color Voice	128, 129, 130, 106, 107
Comtronics	128, 129, 130 ,106, 107
Curtis	112, 113
Diamond	124, 132, 125
Eagle	129
Eastern	134
GC Brand	132, 105
GE	111, 112, 113
Gemini	122, 143
General Instruments / Jerrold / Motorola	111, 119, 120, 121, 122, 123 124, 125, 126, 127
Hamlin	140, 141, 142, 145, 118, 112
Hitachi	103, 124
Macom	103, 104, 105, 108
Magnavox	128, 129, 130, 106, 107, 133, 138
Memorex	130
Movietime	132, 105
Oak	139, 137, 102
Panasonic	109, 110, 114
Paragon	117
Philips	128, 129, 130, 106, 107, 133, 138, 131
Pioneer	101, 116
Pulsar	105, 132
Puser	132
RCA	115
Realistic	132
Regal	112, 118, 140, 141, 142, 145
Regency	134
Rembrant	137, 132, 105, 138
Samsung	105
Satellite	100
Scientific Atlanta	111, 112, 113
Signature	119, 124, 125, 126, 127, 120, 121, 122, 111
SL Mark	105, 101
Sprucer	105, 110
Starcom	119, 124, 125, 126, 127, 120, 121, 122, 111
Stargate	132, 105
Teleview	101, 105
Texscan	144
Tocom	135, 136
Toshiba	104
Unika	132, 125
United Artists	139, 137, 102
United Cable	119, 124, 125, 126, 127, 120, 121, 122, 111
Universal	122, 132
Videoway	106
Viewstar	129, 130
Zenith	117, 100

Satellite Receivers

Mitsubishi	006 (same as 173)
Echostar/Dishnetwork	175, 182, 183, 188
Express VU	175
GE	176
Gradient	186
Hitachi	173, 181, 184
(HNS)Hughes	173
Magnavox	171, 172
Panasonic	174
Philips	171, 172
Proscan	176, 179, 180, 185
RCA	176, 179, 180, 185
Sony	177
Star Choice	173
Toshiba	170, 173
Uniden	171, 172
WebTV	187

VCRs

Mitsubishi	001, 002, 060, 067, 068, 061, 062
Admiral	055
Aiwa	047, 052
Akai	049, 034, 035, 036
Audio Dynamic	059, 031
Bell & Howell	025, 033
Broksonic	040, 046
Canon	043, 045
Citizen	026
Craig	025, 049, 026
Curtis Mathes	065, 044, 047
Daewoo	063, 021, 044, 079, 078
DBX	059, 030, 031
Dimensia	065
Emerson	023, 038, 039, 040, 045, 046, 062, 063
Fisher	025, 028, 029, 027
Funai	047, 046, 040
GE	057, 065, 044, 079
Go Video	057, 069, 070, 071
Goldstar	026
Hitachi	043, 065, 020
Instant Replay	044, 043
Jensen	059
JVC	059, 030, 031, 054, 076, 077
Kenwood	059, 030, 026, 031
LXI	047, 026, 020, 027, 028, 025, 029
Magnavox	051, 043, 044
Marantz	059, 030, 031
Marta	026
Memorex	044, 029
MGA	058, 060, 067, 068, 061, 062
Minolta	020, 065
Multitech	067, 047, 024
NEC	059, 030, 031, 054
Olympic	044, 043
Optimus	048, 041, 055, 026
Orion	046, 040
Panasonic	043, 044, 041, 042
Penney	044, 020, 065, 025, 059, 030, 031
Pentax	020, 031, 065
Philco	051, 044, 047, 043, 046, 040
Philips	051, 043, 044
Pioneer	043
Proscan	065, 020, 043, 044, 051, 021, 021
Quasar	041, 042, 043, 044
Radio Shack	053, 044, 025, 056, 029, 060, 047
RCA	053, 065, 020, 043, 044, 049, 051, 021, 022
Realistic	044, 025, 056, 029, 060, 047
Samsung	057, 022, 024, 053
Sansui	059, 046, 040, 072
Sanyo	025, 029
Scott	021, 022, 024, 029, 058, 060, 067, 068, 046, 040
Sears	025, 026, 027, 028, 020
Shaintom	037
Sharp	055, 056
Signature 2000	047, 055
Singer	037
Sony	048, 049, 050, 073, 074, 075
SV2000	047
Sylvania	051, 043, 044, 047
Symphonic	047
Tashiro	026
Tatung	059, 030, 031
TEAC	059, 030, 047, 031
Technics	032, 041, 042, 043, 044
Teknika	044, 047
Toshiba	021,
Totevision	026
Vector Research	031
Wards	055, 056, 029, 064, 026
Yamaha	025, 059, 030, 031
Zenith	064

Cleaning

Normally, light dusting with a dry, non-scratching duster will keep your TV clean. If cleaning beyond this is needed, please use the following guidelines:

First, turn off the TV and unplug the power cord from the power outlet.

Top and Sides of the TV:
 • Gently wipe down your TV with a soft, non-abrasive cloth such as cotton flannel or a clean cloth diaper, lightly moistened with water. Dry with a second dry, soft, non-abrasive cloth.
 • For oily dirt, add a few drops of mild liquid detergent, such as dishwashing detergent to the water used to moisten the cloth. Rinse with a second cloth moistened only with water. Dry with a third dry, soft, non-abrasive cloth.

Screen behind the Diamond Shield™:
 • Follow the instructions for the top and sides, however, wipe gently in an up and down motion, following the grooves in the screen.
 • Clean the entire screen evenly, not just sections of the screen.
 • Do not allow liquid to drip down the grooves of the screen as some liquid may enter the TV between the screen and the screen frame.
 • You may purchase Mitsubishi Screen Cleaner, part number CLEANER-VSS, by calling (800) 553-7278.

Anti-Glare Diamond Shield™:
(Diamond Series Models WS-55711, WS-65711, WS-65712 and WS-73711)

Anything abrasive can scratch the anti-glare coating of the Diamond Shield™ and household and window cleaners can remove the coating.

 • Follow the instructions for cleaning top and sides, however, moisten the cloth with only water.

 • Do not use any cleaning chemicals on the Diamond Shield™.

 • DO NOT use Mitsubishi Screen Cleaner on the Anti-Glare Diamond Shield™

Cloth speaker grills:

 • Lightly brush with a soft brush cloth, or lint brush.
 • If necessary, you can vacuum using the brush and hose attachments of your vacuum cleaner. Do not use the beater brush section on the grill cloth.

General Cleaning Warnings:
 • DO NOT allow liquid to enter the TV through the ventilation slots or any crevice.
 • DO NOT use any strong or abrasive cleaners as these can scratch the surfaces.
 • DO NOT use any cleaners with ammonia, bleach, alcohol, benzine, or thinners as these can dull the surfaces.
 • DO NOT spray liquids or cleaners directly on the TV's surfaces.
 • DO NOT scrub or rub the TV harshly. Wipe it gently.

<div style="border:1px solid">

IMPORTANT

DO NOT use any kind of abrasive or liquid cleaner on the surface of the TV screen or Diamond Shield™.

</div>

<div style="border:1px solid">

IMPORTANT

For further assistance, call (800) 332-2119.

</div>

Service

If you are unable to correct a problem with your TV, consult your Mitsubishi dealer or a Mitsubishi Authorized Warranty Service Center.

- DO NOT adjust any controls other than those described in this Owner's Guide.
- DO NOT remove the protective back cover of your TV.

Menus not described and shown in this owner's guide are designed for Factory use and for Authorized Service Personnel. Damage caused to the TV by non-authorized changes or changes to these menus made by non-authorized persons are not covered under warranty.

IMPORTANT
For further assistance, call (800) 332-2119

Appendix D: Cleaning and Service

Diamond Shield™ Installation
for Models WS-B55, WS-55511, WS-65511 and WS-65611

The instructions below will lead you through the Diamond Shield installation process.

Included in the Diamond Shield package are the following items:

For model WS-65511 and WS-65611 only.

(1) Diamond Shield™

(2) molding clips

1. Carefully remove the Diamond Shield™ from its protective packaging. Wipe off any dust with a lint-free cloth.

2. Begin by inserting the shield, sliding it into the channels, starting at one side. Gently bow the Diamond Shield™ toward you and insert the side of the Diamond Shield™ into side channel then install the opposite side.

3. Install the top and bottom molding clips by pressing them into the opening, starting at a corner. Do not force the clip. The clip will slide into place. This completes the Diamond Shield™ installation.

To remove the Diamond Shield™, reverse the order of the above process.

Diamond Shield™ for the models WS-B55 and WS-55511 comes installed by the factory.
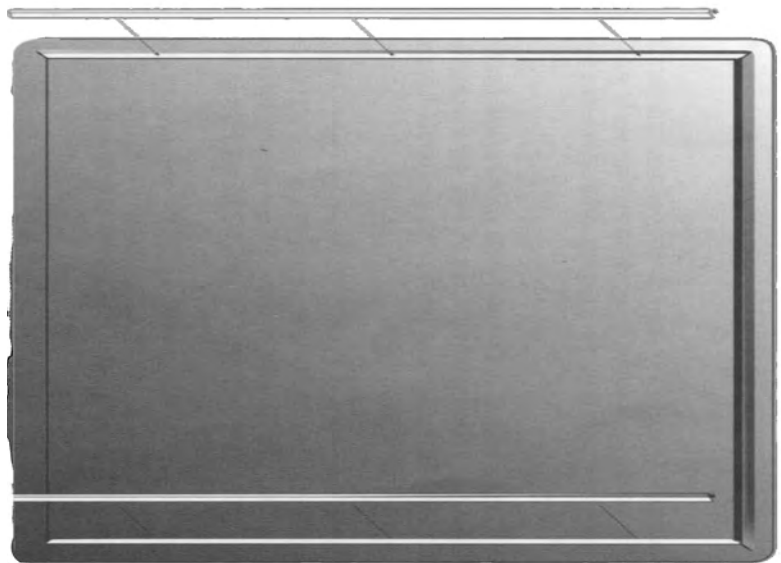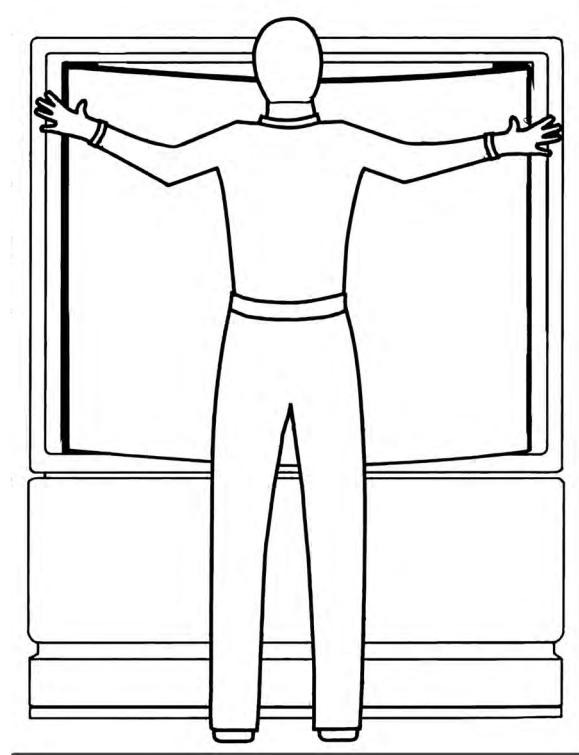
Diamond Shield™ Installation for Models WS-48511, WS- 55711, WS-65711, WS-65712 and WS-73711

The instructions below will lead you through the Diamond Shield installation process.

Included in the Diamond Shield package are the following items:

For models WS-65711, WS-65712 and WS-73711 only.

 (1) Diamond Shield™

 (2) molding clips

1. Carefully remove the Diamond Shield™ from the protective packaging. Wipe off any dust with a lint-free cloth. Do not use any cleaners on the anti-glare Diamond Shield™.

2. Begin by inserting the shield, sliding it into the channels, starting at the bottom. Gently bow the Diamond Shield™ toward you and insert the top of the Diamond Shield™ into the top channel.

3. Install the left and right molding clips by pressing them into the opening, starting at a corner. Do not force the clip. The clip will slide into place. This completes the Diamond Shield™ installation.

To remove the Diamond Shield™, reverse the order of the above process.

Diamond Shield™ for the models WS-48511 and WS-55711 comes installed by the factory.
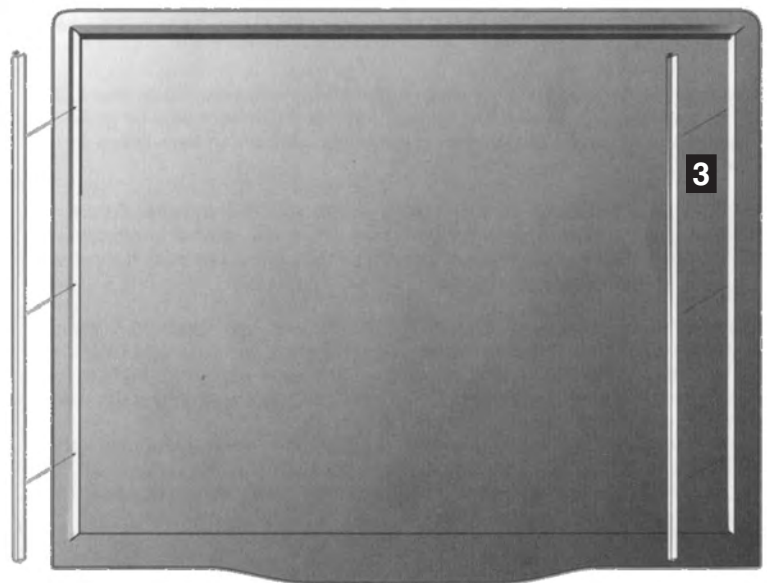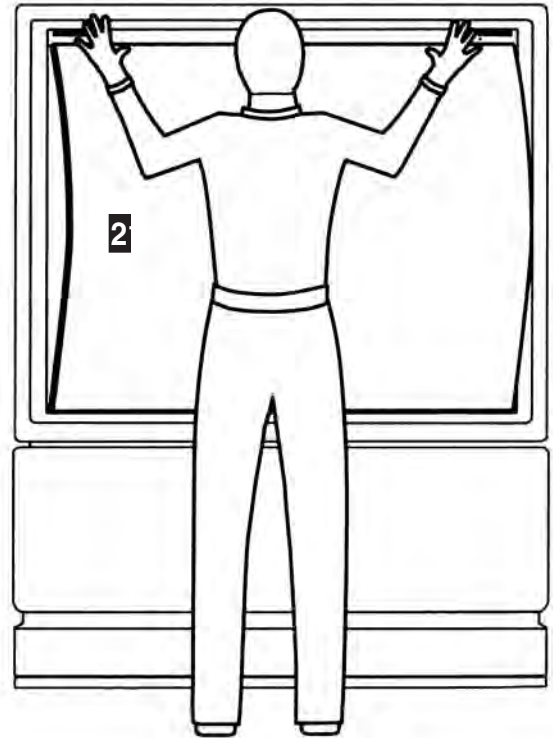
Cabinet Separation for Model WS-65511

**Instructions for Separating the Upper and Lower
Section of the Projection Television Cabinet
For Mitsubishi Dealers and Service Personnel ONLY**

This Mitsubishi projection television cabinet has been assembled in two pieces.
These pieces may be separated to allow for easier delivery and setup.
The instructions below show how to safely separate and reattach the cabinet.

IMPORTANT

- **This projection television weighs over 320 pounds and has many sensitive components.**
- **This dismantling procedure should be done by authorized Mitsubishi Dealers or Service Personnel ONLY.**

The following operations should be performed by two people:

Front Cabinet Disassembly Procedures

a Remove the Speaker Grille by gently pulling both the right and left side of the Speaker Grille away from the wood cabinet.

b Undo the wire ties and disconnect the CC and ZF connectors.

c Remove the Screws that attach the Screen Frame to the wood Cabinet-Bottom. The Screws are located at the bottom portion of the screen frame.

d This operation should be performed by two people. Carefully remove the Screen Frame by holding the sides and bottom of the frame and lift the frame vertically off the Cabinet. NEVER PULL THE SCREEN FRAME FROM THE TOP.

e Place the Screen Frame in a location where nothing will come in contact with the screens. The screens' surface can be damaged if not properly handled.
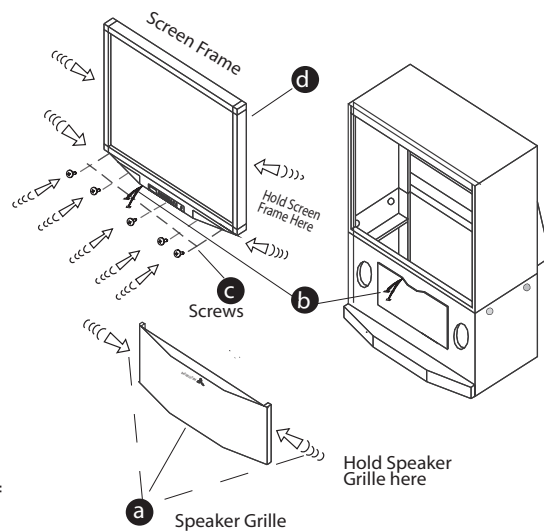
The following operations should be performed by two people:

Cabinet Separation Procedure

f Remove the decorative Plastic Covers (2) on each side of the cabinet and then remove the exposed Screws (2) on each side.

g Carefully lift the Cabinet-Top vertically until the Brackets are clear from the Cabinet-Bottom.

h Carefully place the Cabinet-Top on the floor.
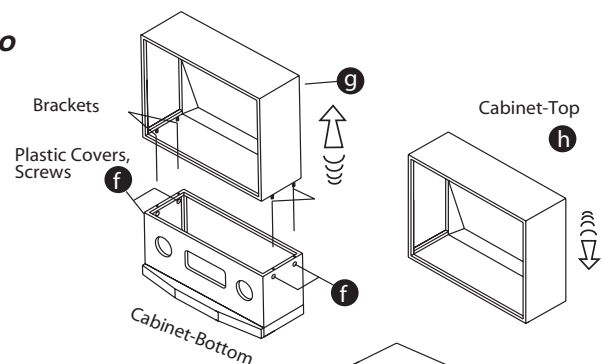
Cabinet Re-assembly

i Once you have moved and positioned the Cabinet-Bottom to its desired location, reverse the procedure and mount the Cabinet-Top on the Cabinet-Bottom. Be sure you align the Brackets properly. KEEP FINGERS CLEAR OF ALL JOINTS! Replace the Screws and the decortive Plastic Covers that were removed in step f. Reinstall the ScreenFrame d. Replace the Screws per step c. Place wires in the wire ties and join the connectors per step b. Reinstall Speaker Grille a.

Screen Frame

d

Hold Screen Frame Here

c

Screws

b

a Speaker Grille

Hold Speaker Grille here

Brackets

Plastic Covers, Screws

f

g

f

Cabinet-Bottom

Cabinet-Top

h

i
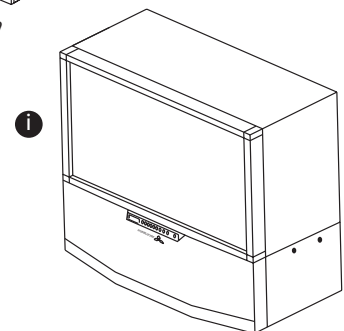
Cabinet Separation for Model WS-65611, WS-65711 and WS-73711

Plastic Covers
Screws

Cabinet-Top

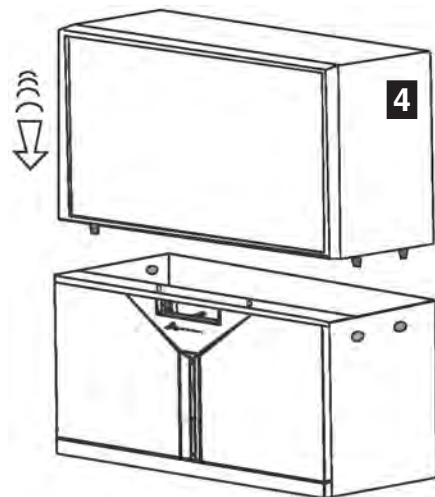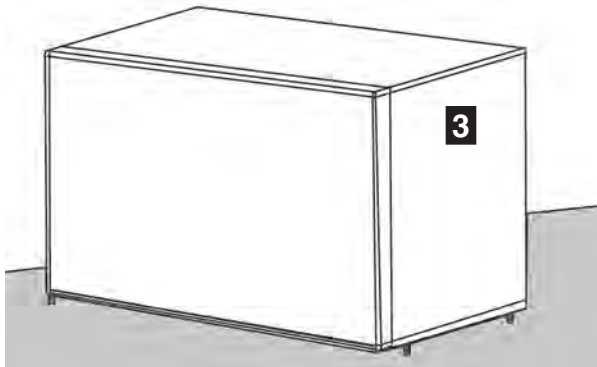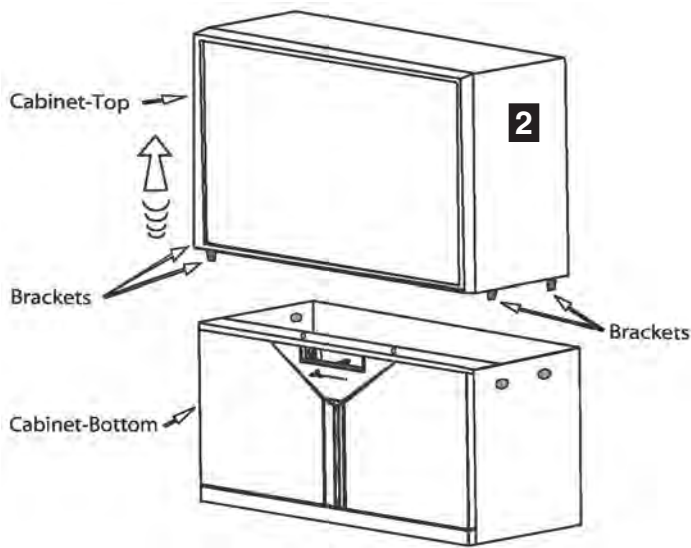Brackets

Brackets

Cabinet-Bottom
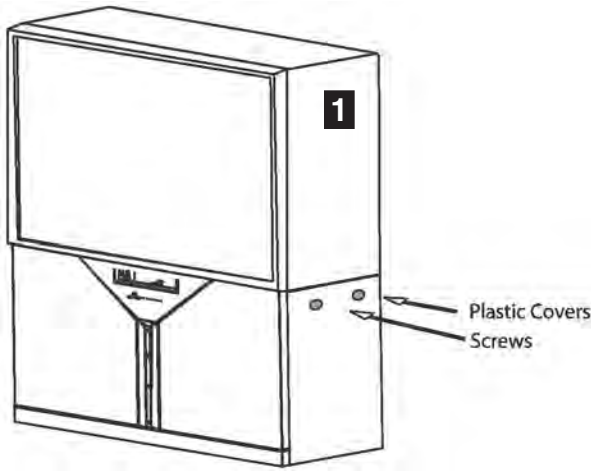
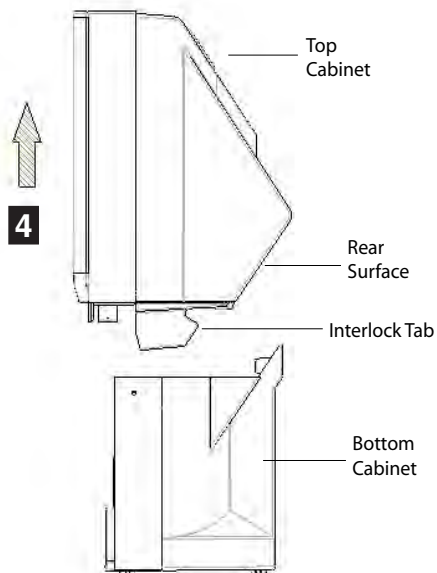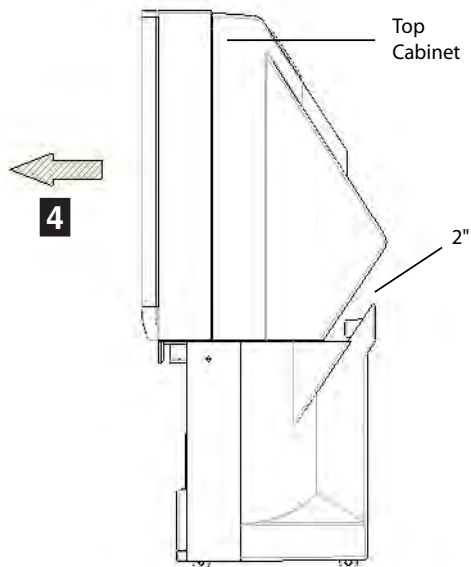## For Mitsubishi Dealers and Service Personnel Only

The Mitsubishi TV models WS-65611, WS-65711 and WS-73711 cabinets are assembled in two pieces. These pieces may be separated to allow for easier delivery and set up. The instructions below show how to safely separate and reattach the cabinet. This TV weighs over 320 lbs and has many sensative components. This dismantling procedure should be done by authorized Mitsubishi Dealers or Service Personnel only.

The following steps should be performed by two people:

1. Remove the decorative Plastic Covers (2) on each side of the cabinet and then remove the exposed Screws (2) on each side.

2. Carefully lift the Cabinet-Top straight up until the Brackets are clear from the Cabinet-Bottom.

3. Carefully place the Cabinet-Top on the floor.

4. Once you have moved and positioned the Cabinet-Bottom to its desired location, reverse the procedure and mount the Cabinet-Top on the Cabinet-Bottom. Be sure you align the Brackets properly. Keep fingers clear of all joints! Replace the screws and the decorative Plastic Covers.

Cabinet Separation for Model WS-65712

For Mitsubishi Dealers and Service Personnel Only

The Mitsubishi TV model WS 65712 cabinet is assembled in two pieces. These pieces may be separated to allow for easier delivery and set up. The instructions below show how to safely separate and reattach the cabinet. This TV weighs over 249 lbs and has many sensitive components. This dismantling procedure should be done by authorized Mitsubishi Dealers or Service Personnel only.
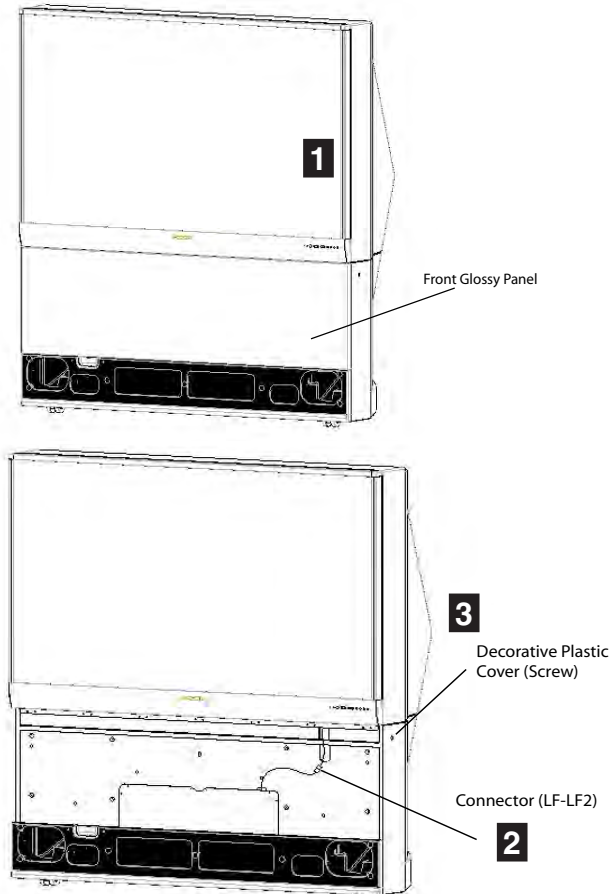
The following operation should be performed by two people.

Follow the procedures for separating the upper and lower sections of the projection TV cabinets as described below:

1. Remove the glossy wood front panel by pulling forward from the left and right sides of the TV.

2. Disconnect the AV jack connector.

3. Remove the decorative plastic cover on each side of the cabinet. Remove the exposed screw on each side.

4. Slide forward the top cabinet then carefully lift the cabinet-top straight up until the brackets are clear from the cabinet-bottom.

5. Carefully place the cabinet-top on to the floor.

6. Once you have have moved and positioned the cabinet-bottom to its desired location, reverse the procedure and mount the cabinet-top on the cabinet-bottom. Be sure you align the brackets properly. Keep fingers clear of all joints! Replace the screws and the decorative plastic covers that were removed in Step 1.

1

Front Glossy Panel

3

Decorative Plastic Cover (Screw)

Connector (LF-LF2)

2

Top Cabinet

4

2"

Top Cabinet

4

Rear Surface

Interlock Tab

Bottom Cabinet

Problem	Possible Solution
• The TV remote control does not work.	• Check that the batteries are installed correctly. • Check that the selected switch is set to "TV". • Be no further than 20 feet from the TV when using the remote control
• The TV takes several seconds to respond to channel commands.	• It is normal for digital channels to take longer to tune in. • Press ENTer after a channel number to avoid delays. • Use the three digit number, i.e 002 for channel 2. • Enter 5 digits for digital channels.
• You cannot access a channel.	• Use number keys instead of CHANNEL up/down. • Be sure the channel you want to view is in memory. • Check that the TV is turned to the correct device or antenna for that channel, by pressing the DEVICE button. • Make sure the V-Chip lock is off.
• On-screen displays appear each time you change a function.	• This is part of normal TV operation.
• You cannot program the TV to turn on automatically.	• The TV may be locked. • The clock may not be set.
• There is no sound even when the volume is turned up.	• Check audio source in Device Menu. • Check to see if the MUTE button is on. • The TV's "Listen to:" setting may be set to SAP. • Check that "TV Speakers" setting is ON in the Audio/Video menu.
• You have forgotten your lock passcode.	• See *Appendix A, Bypassing the V-Chip Lock.*
• PIP does not display a picture.	• Make sure the V-Chip lock is off. • Not all inputs can be displayed as a PIP.
• The sound does not match the screen picture.	• NetCommand™ is setup incorrectly. • The TV's "Listen to:" setting may be set to SAP. • If using stereo or A/V receiver speakers, check input selection on the stereo or A/V receiver. • If using stereo or A/V receiver, check that AUDIO of MONITOR OUTPUT on TV's back panel is connected to the A/V receiver.
• There is a large black or gray rectangle on the screen.	• The TV closed captioning has been set to "text" mode in the Captions menu. Turn off because there is no text information being broadcast.
• You cannot see a picture when you play a VCR tape.	• Display the Device Selection menu and select the correct VCR. • Check your VCRs owner's guide for further trouble shooting.
• V-Chip is not working	• Make sure that V-Chip is On. • If V-Chip Time is currently set to disable the V-Chip lock, the V-Chip will not block programming.

Problem	Possible Solution
• The TV will not turn on after being plugged in.	• If green light on front panel is blinking, please wait for at least one minute for light to turn off, then try to power on again.
• TV functions do not respond to the remote control or to front panel control and the TV will not power off.	• Use the System Reset button as explained below.
• When viewing a stopped VCR, white lines are rolling on the screen.	• Turn off video mute for the VCR. • Begin playing the tape. • Change the VCR input to the antenna input.
• TV turned itself Off and the light on the Front Panel started flashing	• Momentary power fluctuation caused the TV to turn Off to prevent damage. Wait for the green light to stop flashing and turn On again. If the TV does not stay turned On, use the System Reset button. If this happens frequently, obtain an AC line in power conditioner / surge protector.

Using The System Reset Button: If the TV doesn't respond to either the remote control or the front panel controls will not power off, press the SYSTEM RESET button on the front panel with a pointed item like the point of a ball point pen or end tip of a paperclip.
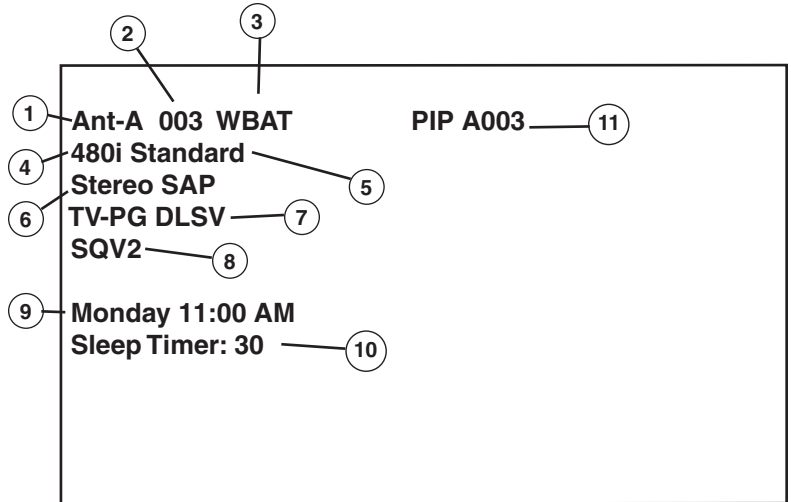
The TV will turn off and the TIMER light will flash quickly for about one minute. When the TIMER light stops flashing, you may turn on the TV again. The changes you made while the TV was on before you used the SYSTEM RESET button may be cancelled, however, the changes you made previously are not cancelled. Only those changes since the last power on may be lost when the system reset button is pressed. All other settings are retained.

Appendix G: Troubleshooting

On Screen Information Displays

When you turn on the TV, change Devices, change Channels or when you press the INFO button on the remote control the TV will display the current status. Below are the most common displays; please note that seldom or never do all of the different status indicators appear at the same time.
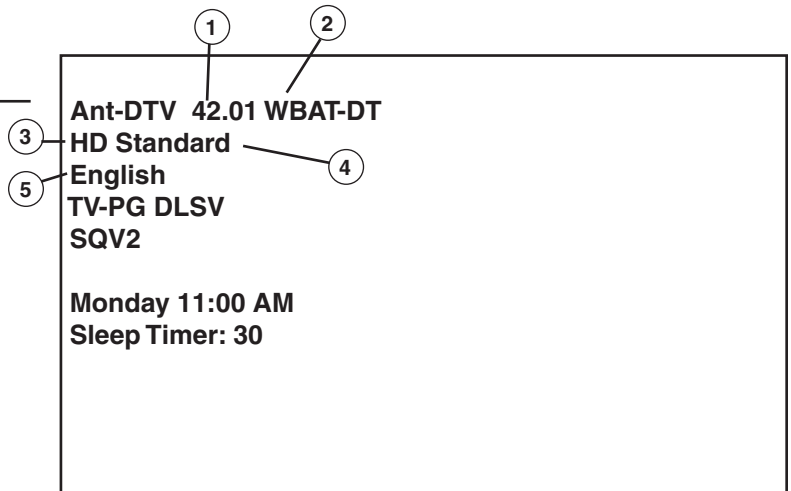
Analog Antenna or Devices

1. Antenna or Device being viewed
2. Analog channel being received: If antenna being viewed
3. Analog channel name (only if manually programmed)
4. Signal Type being received
   Possible:
   Ant-A, Ant-B or Input 1-5 – 480i
   Component 1 or 2 – 480i or 480p
   Input-DTV – 480i, 480p, 1080i
5. Screen format being used
   Possible:
   480i signals – Standard, Expand, Zoom, Stretch, Narrow
   480p signals – Standard, Narrow
   1080i signals - Standard
6. Stereo and/or SAP being broadcast
7. V-Chip Ratings
8. Channel in SuperQuickView bank 2
9. Day and Time
10. Sleep Timer remaining time
11. PIP source and channel

```
②   ③

① Ant-A  003  WBAT        PIP A003  ⑪
④ 480i Standard
  Stereo SAP               ⑤
⑥ TV-PG DLSV  ⑦
  SQV2  ⑧

⑨ Monday 11:00 AM
  Sleep Timer: 30  ⑩
```

Digital Antenna

1. Digital Major and Sub channel number
2. Digital Channel Name (only if broadcast)
3. Signal Type being broadcast/received
   Possible: SD 4:3, SD 16:9 or HD
4. Screen format being used
   Possible:
   SD 4:3 - Standard, Expand, Narrow
   SD 16:9 or HD - Standard
5. Language being broadcast

```
①        ②

  Ant-DTV  42.01 WBAT-DT
③ HD Standard
        ④
⑤ English
  TV-PG DLSV
  SQV2

  Monday 11:00 AM
  Sleep Timer: 30
```

Digital IEEE 1394 Device

1. Status of D-VHS VCR or IEEE 1394 device
2. Counter of D-VHS VCR
3. Media type in D-VHS VCR
4. Special message line
   (shows only when a special message is needed; may be seen with Analog signals)

```
  DVHS
  HD Standard
  English
  TV-PG DLSV
① Play 01:20:15  ②
③ DVHS
  Monday 11:00 AM
  Sleep Timer: 30

④ Special Message Line
```

Demo Mode

This TV has a demo mode for use in a retail store.

To turn On/Off, press the following buttons in sequence:

MENU, 0, QV, 0

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MITSUBISHI DIGITAL ELECTRONICS AMERICA, INC. ("MDEA") warrants to the original purchaser of this television that if purchased from an authorized MITSUBISHI Audio/Video Dealer, should it prove defective by reason of improper workmanship and/or material:

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b. Embedded Software. MDEA warrants that all software incorporated into this television set (the "Embedded Software") will perform in accordance with the functional description of Embedded Software in all material respects, but MDEA does not warrant that the Embedded Software is error-free. MDEA also does not warrant that the Embedded Software will be compatible under IEEE 1394 AV/C and HAVi software standards with products produced by any other manufacturer. The warranty contained in this section shall continue for a period of one year. If, after prompt notice within the warranty period, MDEA determines that the Embedded Software has failed to perform in accordance with such functional description in all material respects and if such failure is not due to accident, misuse, modification or misapplication of the Embedded Software, then MDEA shall modify or replace the nonconforming Embedded Software at no charge to you, which at MDEA's sole discretion may be fulfilled by means of modification or replacement software contained on a replacement memory card for Customer installation. The foregoing shall be MDEA's sole obligation to you under this limited warranty. All rights under this limited warranty on the Embedded Software also subject to your compliance with the terms of the Software License Agreement applicable to this television, and this limited warranty on the Embedded Software shall be null and void if the Embedded Software is modified or changed in any manner except as specifically authorized by MDEA.

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d. Notice. To obtain warranty service, you must notify an authorized MITSUBISHI service center of any defect within the applicable warranty time period.

1. TO OBTAIN WARRANTY SERVICE:

a. Contact your nearest authorized MITSUBISHI service center whose name and address can be obtained from your MITSUBISHI dealer or by writing or calling MDEA at the address and telephone number provided below.

b. Warranty service will be provided in your home or, if required, at an authorized service shop, provided that your television is located within the geographic territory customarily covered by an authorized MITSUBISHI service center. If not, you must either deliver your television to an authorized service location at your own expense, or pay for any travel and/or transportation costs the service center may charge to and from your home. Actual service labor will be provided without charge.

c. Proof of purchase date from an authorized MITSUBISHI dealer is required when requesting warranty service. Present your sales receipt or other document which establishes proof and date of purchase. THE RETURN OF THE OWNER REGISTRATION CARD IS NOT A CONDITION OF WARRANTY COVERAGE. However, please return the Owner Registration Card so that we can contact you should a question of safety arise which could affect you.

2. THIS WARRANTY DOES NOT COVER damage to Diamond Shield, Lenticular screen or Fresnel lens, screen frame, cosmetic damage or to any other product where such damage is caused by unauthorized modification, alteration, repairs to or service of the product by anyone other than an authorized MITSUBISHI service center; physical abuse to or misuse of the product (including any failure to carry out any maintenance as described in the Owner's Guide or any product damaged by excessive physical or electrical stress); any products that have had a serial number or any part thereof altered, defaced or removed; product use in any manner contrary to the Owner's Guide (including uneven picture tube aging and imprinted images on the viewing screen); freight damage; or any damage caused by acts of God or other factors beyond the reasonable control of MDEA, such as power surge damage caused by electrical system or lightning. This warranty also excludes service calls where no defect in the product covered under this warranty is found, service calls related to unsatisfactory audio or visual reception or signal unless caused by a defect in the product that is covered under this warranty, all costs, expenses or any other damages arising from product installation, or set-ups, any adjustments of user controls (including convergence, contrast, brightness, color, tint, fine tuning, sharpness), other adjustment necessary to prepare the unit for display or use, connection with any external audio receiver, antenna, cable or satellite systems, or service of products purchased or serviced outside the U.S.A. Please consult the operating instructions contained in the Owner's Guide furnished with the product for information regarding user controls.

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6. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

7. BEFORE REQUESTING SERVICE, please review the instruction booklet to insure proper installation and correct customer control adjustment. If the problem persists, contact your nearest MITSUBISHI Dealer for the name(s) of authorized MITSUBISHI Service Center(s). If you are unable to obtain this information, please call 800-332-2119, or write us at the address below.

MITSUBISHI DIGITAL ELECTRONICS AMERICA, INC.

9351 Jeronimo Road

Irvine, CA 92618-1904

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Notes

Notes

Connection: Helpful Hints

Q My VCR (or other device) does not have two sets of stereo audio outputs; how can I connect this device's audio to both the TV and the A/V Receiver?

A. There are two solutions:

1. Connect the single set of stereo audio outputs to the TV only. Use the Edit NetCommand™ feature to "Change" the setup of this device. In the Connection screen part of "Change" make sure both audio and video for the TV input are check marked and neither the audio or the video for the AVR input are check marked. This will allow the NetCommand™ system to use the TV outputs to transfer the device's audio to the A/V Receiver. See Edit NetCommand™ Setup.

2. Use RCA type "Y" splitter cables to split the device's audio output to be connected to both the TV and the A/V Receiver.

Q. Since I have both the TV monitor stereo audio output and TV digital audio output connected to the same input designation on my A/V Receiver, how do I switch between analog audio and digital audio?

A. This depends on the individual A/V Receiver. Some A/V Receivers will switch automatically to digital when a digital audio signal is supplied so you do not need to do anything. Other A/V Receivers can be manually switched by remote control, for these types of A/V Receivers, see the NetCommand™ Guide Appendix for NetCommand™ control of this features. Some A/V Receivers will require that you make this change on the front panel of the A/V Receiver.

Q. The front panel of my A/V Receiver is too tall or too convex for the IR emitter signal to reach the remote control sensor of the A/V Receiver. What can I do?

A. There are several possible solutions.

1. Mount the IR Emitter on the top, front edge of the A/V Receiver over the remote control sensor. Use tape to secure it in place.

2. Mount the IR Emitter on the underside of the self above the A/V Receiver (if the A/V Receiver is in a cabinet). Use double sided tape to secure it in place.

3. Some small stick-on emitters from other manufacturers may be compatible with the IR Emitter – Home Theater jacks, these may be used instead of the supplied IR Emitters.

Q. I occasionally need to see the menu from my A/V Receiver, how can I connect it to the TV for this purpose?

A. You can connect the video output of the A/V Receiver to an unused input on the TV. Then use the Edit NetCommand™ to "Add" this as an "Other" device, not an A/V Receiver. On the "Connection", screen indicate which TV input was used and check mark the video box. Make sure the TV input audio box and both the audio and video boxes for the AVR input are not check marked. You should also name this device so you can easily identify it on the Device Selection Menu.

Q. I have a high definition receiver I would like to connect and it also has an S-video output I would like to be able use as well. Is there are way to connect this receiver both ways?

A. Yes, this item will appear twice in the Device Selection Menu. Just add this unit twice, once using the Inp-DTV and once using one of the S-video inputs. Make sure you indicate that this is the same manufacturer for both. We suggest that you connect stereo audio outputs with the S-video to the TV so that you do not need to use two inputs on the A/V Receiver. If this is a NetCommand™ compatible HDTV receiver that HD or SD outputs can be switched by remote control, see the NetCommand™ Guide Appendix for NetCommand™ control of this feature.

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